ARTICLES PUBLIES OU IN PRESS

Active Monitoring of Persons Exposed to Patients with Confirmed COVID-19 — United States, January–February 2020

In December 2019, an outbreak of coronavirus disease 2019 (COVID-19), caused by the virus SARS-CoV-2, began in Wuhan, China (1). The disease spread widely in China, and, as of February 26, 2020, COVID-19 cases had been identified in 36 other countries and territories, including the United States. Person-to-person transmission has been widely documented, and a limited number of countries have reported sustained person-to-person spread.(...)

MMWR (e-date: 06/03/2020)
Burke RM, Midgley CM, Dratch A, et al.
Lien original

Initial Investigation of Transmission of COVID-19 Among Crew Members During Quarantine of a Cruise Ship — Yokohama, Japan, February 2020

An outbreak of coronavirus disease 2019 (COVID-19) among passengers and crew on a cruise ship led to quarantine of approximately 3,700 passengers and crew that began on February 3, 2020, and lasted for nearly 4 weeks at the Port of Yokohama, Japan (1). By February 9, 20 cases had occurred among the ship's crew members. By the end of quarantine, approximately 700 cases of COVID-19 had been laboratory-confirmed among passengers and crew. This report describes findings from the initial phase of the cruise ship investigation into COVID-19 cases among crew members during February 4–12, 2020.

MMWR Morb Mortal Wkly Rep (e-date: 17/03/2020)
Kakimoto K, Kamiya H, Yamagishi T, Matsui T, Suzuki M, Wakita T
Lien original

Clinical characteristics of severe acute respiratory syndrome coronavirus 2 reactivation.

Previous studies on the pneumonia outbreak caused by the 2019 novel coronavirus disease (COVID-19) were based on information from the general population. However, limited data was available for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) reactivation. This study aimed to evaluate the clinical characteristics of the SARS-CoV-2 reactivation.

J Infect. 2020 Mar 11. pii: S0163-4453(20)30114-6. doi: 10.1016/j.jinf.2020.03.001. [Epub ahead of print] (e-date: 11/03/2020)
Ye G, Pan Z, Pan Y, Deng Q, Chen L, Li J, et al.
Lien original

An update on the 2019-nCoV outbreak.

Cases of 2019-nCoV are now being reported in different regions around the globe, concerning for a possible SARS like epidemic that infected for than 8000 people in 2002-03. Though, major health authorities are still working on understanding the virus and its transmission, here we present a brief report regarding the 2019-nCoV outbreak and what is known so far.

Am J Infect Control. 2020 Mar 11. pii: S0196-6553(20)30074-2. doi: 10.1016/j.ajic.2020.01.023. [Epub ahead of print] (e-date: 12/03/2020)

Ammad Ud Din M, Boppana LKT
Lien original

Skin damage and the risk of infection among healthcare workers managing coronavirus disease-2019.

Since the outbreak of coronavirus disease-2019 (COVID-19) in December 2019, over 200,000 healthcare workers from all over China have been participating in the fight against this highly contagious disease in Hubei province, which is the infected center of China. The skin damages caused by enhanced infection-prevention measures among them, which could reduce their enthusiasm for overloaded work and make them anxious, have been reported frequently. (...)

Lan J, Song Z, Miao X, Li H, Li Y, Dong L
Lien original

The effectiveness of quarantine and isolation determine the trend of the COVID-19 epidemics in the final phase of the current outbreak in China.

OBJECTIVES: Since January 23rd 2020, stringent measures for controlling the novel coronavirus epidemics have been gradually enforced and strengthened in mainland China. The detection and diagnosis have been improved as well. However, the daily reported cases staying in a high level make the epidemics trend prediction difficult. METHODS: Since the traditional SEIR model does not evaluate the effectiveness of control strategies, a novel model in line with the current epidemics process and control measures was proposed, utilizing multisource datasets including cumulative number of reported, death, quarantined and suspected cases. (...)

Tang B, Xia F, Tang S, Bragazzi NL, Li Q, Sun X, et al.
Lien original

COVID 19: Will the 2020 Hajj pilgrimage and Tokyo Olympic Games be cancelled?

Dear Editor, On February 27, 2020, the Kingdom of Saudi Arabia (KSA) Ministry of Foreign Affairs temporarily suspended entry to KSA for the purpose of Umrah and visiting the Prophet's Mosque. In addition, KSA had additional restrictive measures for other visitors, in view of the current COVID-19 outbreak. Such decision echoes concerns of colleagues that SARS-CoV-2 may be seeded in and transmitted out of Saudi Arabia by Umrah visitors. (...)

Gautret P, Al-Tawfiq JA, Hoang VT
Lien original

Coronavirus fulminant myocarditis saved with glucocorticoid and human immunoglobulin.

A 37-year-old male patient was admitted to hospital on 14 January 2020, with chest pain and dyspnoea for 3 days, accompanied by diarrhoea. His blood pressure decreased to 80/50 mmHg. X-ray chest film showed significant enlargement of the heart (*Panel A*: cardiothoracic ratio 0.70). Chest computed tomography (CT) examination indicated pulmonary infection, enlarged heart, and pleural effusion (*Panels B* and *C*). The electrocardiogram suspected ST-segment elevation acute myocardial infarction (III, AVF ST-segment elevation, *Panels D* and *E*), an emergency CT coronary angiography revealed no coronary stenosis. (...)

Hu H, Ma F, Wei X, Fang Y
Lien original

Clinical progression of patients with COVID-19 in Shanghai, China.

Studies on the 2019 novel coronavirus disease (COVID-19) have generally been limited to the description of the epidemiology and initial clinical characteristics. We investigated the temporal progression in patients with COVID-19.

Methods : In this retrospective, single-center study, we included confirmed cases of COVID-19 from Jan 20 to Feb 6, 2020 in Shanghai. Final date of follow-up was February 25, 2020

Lien original

New insights on the antiviral effects of chloroquine against coronavirus: what to expect for COVID-19?

Recently, a novel coronavirus (2019-nCoV), officially known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), emerged in China. Despite drastic containment measures, the spread of this virus is ongoing. SARS-CoV-2 is the aetiological agent of coronavirus disease 2019 (COVID-19) characterised by pulmonary infection in humans. (...)

Lien original

Emergence of SARS-like Coronavirus in China: An Update.

Dear Editor, Recently, the emergence of the novel coronavirus (SARS-CoV-2) that causes coronavirus disease 2019 (COVID-19) in Wuhan, China, has raised great concern all over the world and poses serious threat to global public health, as reported earlier in this journal. Before 2019, only six CoVs were reported to infect human beings: 1) HCoV-229E, HCoV-OC43, HCoV-NL63 and HKU1, associated with mild upper respiratory diseases; 2) SARS-CoV, causing an outbreak in 2002, and MERS-CoV, causing an outbreak in 2012, associated with infective manifestations in the lower respiratory tract and severe respiratory syndrome. (...)

Lien original

Coronavirus Epidemic and Extracorporeal Therapies in Intensive Care: si vis pacem para bellum.

The worldwide outbreak of coronavirus disease 2019 (COVID-19) has demonstrated that we are all part of a small world where diffusion of contagious diseases is inevitable. Although the new coronavirus originated in Wuhan seems to present lower lethality compared to previous epidemic outbreaks from other coronaviruses, its capacity of diffusion has been phenomenal. One infected individual may transmit the virus to 2 or 3 others. Of note, screening based on symptoms and signs is ineffective and asymptomatic persons can spread the disease. (...)

Lien original

SARS-CoV-2 RNA more readily detected in induced sputum than in throat swabs of convalescent COVID-19 patients.

In China, the most common method for diagnosing coronavirus disease 2019 (COVID-19) is the detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA in throat swabs. This technique has a rate of false-negative results that might enable convalescent COVID-19 patients to meet the criteria[1] for discharge from hospital and release from quarantine, resulting in the spread of disease. (...)

Lien original

SARS Coronavirus Redux

As an atypical pneumonia began to appear in December 2019, Zhou et al. worked with remarkable speed to identify the associated virus, determine its relationship to animal viruses, and evaluate factors conferring infection

susceptibility and resistance. These foundational results are being advanced to control the current worldwide human coronavirus epidemic.

Qing E, Gallagher T
Lien original

Clinical and CT Imaging Features of the COVID-19 Pneumonia: Focus on Pregnant Women and Children

BACKGROUND: The ongoing outbreak of COVID-19 pneumonia is globally concerning. We aimed to investigate the clinical and CT features in the pregnant women and children with this disease, which have not been well reported.
METHODS: Clinical and CT data of 59 patients with COVID-19 from January 27 to February 14, 2020 were retrospectively reviewed, including 14 laboratory-confirmed non-pregnant adults, 16 laboratory-confirmed and 25 clinically-diagnosed pregnant women, and 4 laboratory-confirmed children. The clinical and CT features were analyzed and compared. (...)

Liu H, Liu F, Li J, Zhang T, Wang D, Lan W
Lien original

Behavioral considerations and impact on personal protective equipment (PPE) use: Early lessons from the coronavirus (COVID-19) outbreak. J Am Acad Dermatol. 2020 Mar 11. pii: S0190-9622(20)30391-1. doi: 10.1016/j.jaad.2020.03.013. [Epub ahead of print]

Behavioral considerations and impact on personal protective equipment (PPE) use: Early lessons from the coronavirus (COVID-19) outbreak.

Kantor J
Lien original

Arbidol combined with LPV/r versus LPV/r alone against Corona Virus Disease 2019:a retrospective cohort study.

BACKGROUND: Corona Virus Disease 2019 (COVID-19) due to the 2019 novel coronavirus (SARS-CoV-2) emerged in Wuhan city and rapidly spread throughout China. We aimed to compare arbidol and lopinavir/ritonavir(LPV/r) treatment for patients with COVID-19 with LPV/r only.
METHODS: In this retrospective cohort study, we included adults (age≥18years) with laboratory-confirmed COVID-19 without Invasive ventilation, diagnosed between Jan 17, 2020, and Feb 13, 2020. (...)

Deng L, Li C, Zeng Q, Liu X, Li X, Zhang H, et al.
Lien original

Clinical features of deaths in the novel coronavirus epidemic in China

In response to the recent novel coronavirus outbreak originating in Wuhan, Hubei province, China, observations concerning novel coronavirus mortality are of urgent public health importance. The present work presents the first review of the fatal novel coronavirus cases in China. Clinical data of fatal cases published by the Chinese Government were studied. As of 2 February 2020, the clinical data of 46 fatal cases were identified. The case fatality rate was significantly higher in Hubei province than the rest of China. While 67% of all deceased patients were male, gender was unlikely to be associated with mortality. (...)

Leung C
Lien original

Prominent changes in blood coagulation of patients with SARS-CoV-2 infection.

Background As the number of patients increases, there is a growing understanding of the form of pneumonia sustained by the 2019 novel coronavirus (SARS-CoV-2), which has caused an outbreak in China. Up to now, clinical features and treatment of patients infected with SARS-CoV-2 have been reported in detail. However, the relationship between SARS-CoV-2 and coagulation has been scarcely addressed. Our aim is to investigate the blood coagulation function of patients with SARS-CoV-2 infection. Methods In our study, 94 patients with confirmed SARS-CoV-2 infection were admitted in Renmin Hospital of Wuhan University. (...)

Lien original

All eyes on Coronavirus-What do we need to know as ophthalmologists.

Lien original

Will the Third Wave of Coronavirus Disease 2019 Really Come in Korea?

I personally predicted that about 10,000 people would be diagnosed with coronavirus disease 2019 (COVID-19) around March 10, based on a regression calculation that was estimated from last week's trend provided by the Korean Centers for Disease Control and Prevention.1 However, since March 5, the number of confirmed patients began to slow down slightly, and as of March 8, the inclination is clearly slowing down.(...)

Lien original

Imported Wuhan Coronavirus Infection: Is there any Correlation with Number of Immigrants from Endemic Area and Period after the First Outbreak?

Dear Editor, Wuhan novel coronavirus infection is a newly emerging viral disease that was firstly reported from Wuhan China in December 2019.The spread of the disease has become a big public health problem. The importation of infection to other new settings via air travel is a big global consideration. Thailand is the first country that the disease was imported from China. Since the first confirmation of the emerging disease on 3 January 2020, Thailand had implemented screening for immigrants from China, the origin of the infection. Until present (29 January 2020), there are totally 14 imported cases from China to Thailand. (...)

Lien original

Era of molecular diagnosis for pathogen identification of unexplained pneumonia, lessons to be learned.

Unexplained pneumonia (UP) caused by a novel coronavirus SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) emerged in China in late December 2019 and has infected more than 9000 cases by 31 January 2020. Shanghai reported the first imported case of COVID-19 (Coronavirus Disease 2019) in 20 January 2020. A combinative approach of real-time RT-PCR, CRISPR-based assay and metagenomic next-generation sequencing (mNGS) were used to diagnose this unexplained pneumonia patient. Real-time RT-PCR and CRISPR-based assay both reported positive. (...)

Lien original

Clinical considerations for patients with diabetes in times of COVID-19 epidemic.

COVID-19 (Coronavirus Disease-2019), a disease caused by the coronavirus SARS-CoV-2 (Severe Acute Respiratory Syndrome-Coronavirus-2), has emerged as a rapidly spreading communicable disease affecting more than 100 countries across the globe at present. The disease is primarily spread through large respiratory droplets, though the possibility of other routes of transmission cannot be ruled out, as the virus has been found in stool and urine of affected individuals. The disease severity has varied from mild self-limiting flu-like illness to fulminant pneumonia, respiratory failure and death. (...)

Gupta R, Ghosh A, Singh AK, Misra A
Lien original

COVID-19 in the Shadows of MERS-CoV in the Kingdom of Saudi Arabia.

Middle East Respiratory Syndrome Coronavirus (MERS-CoV) has plagued the Middle East since it was first reported in 2012. Recently, at the end of December 2019, a cluster of pneumonia cases were reported from Wuhan city, Hubei Province, China, linked to a wet seafood market with a new coronavirus identified as the etiologic agent currently named SARS-CoV-2. Most cases are in Mainland China with international spread to 25 countries. (...)

Barry M, Al Amri M, Memish ZA
Lien original

Clinical feature of COVID-19 in elderly patients: a comparison with young and middle-aged patients.

BACKGROUND: Due to the general susceptibility of new coronaviruses, the clinical characteristics and outcomes of elderly and young patients may be different.
OBJECTIVE: To analyze the clinical characteristics of elderly patients with new-type coronavirus pneumonia (COVID-19). (...)

Liu K, Chen Y, Lin R, Han K
Lien original

Identification of potential cross-protective epitope between a new type of coronavirus (2019-nCoV) and severe acute respiratory syndrome virus.

ecently, a new type of unknown virus causing severe acute respiratory infection was reported in Wuhan city, Hubei province, China. Infection of this virus was first reported in December 2019, and origin of the virus was traced back to a large seafood/wide animal market in Wuhan city. The serious clinical symptoms of the viral infection, including fever, dry cough, dyspnea, and pneumonia, may result in progressive respiratory failure and even death. Moreover, the quick spread of the virus has caused an epidemic in China, as well as infection cases worldwide.

Qiu T, Mao T, Wang Y, Zhou M, Qiu J, Wang J
Lien original

The SARS-CoV-2 outbreak: what we know.

There is a current worldwide outbreak of the novel coronavirus Covid-19 (coronavirus disease 2019; the pathogen called SARS-CoV-2; previously 2019-nCoV), which originated from Wuhan in China and has now spread to 6 continents including 66 countries, as of 24:00 on March 2, 2020. Governments are under increased pressure to stop the outbreak spiraling into a global health emergency. (...)

Wu D, Wu T, Liu Q, Yang Z
Lien original

Exported Wuhan Novel Coronavirus Infection: An Expected Rate with Reference to Main Destination of Chinese Tourist, Thailand.

Dear Editor, Novel coronavirus 2019 infection is a new emerging coronavirus infection. This coronavirus infection was firstly reported in China in December 2019. The patients who get infection usually have an acute febrile illness with respiratory tract problems.The big outbreak occurs in China and becomes a serious public health problem. At present, this new disease is already imported to many countries due to international travel via an

international flight. Thailand is the main destination of many Chinese tourists, therefore, it is no doubt that the first exported case of Wuhan novel coronavirus was reported from Thailand. (…)

Yasri S, Wiwanitkit V
Lien original

Positive Screening for Wuhan Novel Coronavirus Infection at International Airport: What's the Final Diagnosis for Positive Cases. Int J Prev Med. 2020 Feb 21;11:30. doi: 10.4103/ijpvm.IJPVM_42_20. eCollection 2020.

Dear Editor, Active screening at the international airport is an important method in international infectious control. The main aim is for the prevention of imported new emerging infectious diseases. Recently, there was a newly emerging infectious disease, Wuhan novel coronavirus infection, from China that becomes the new global public health concern. The countries with international flight connections with China implemented active screening at the international airport as a tool for infection control. Thailand is a country in Indochina that has 58 international flights connecting with Wuhan, China.(...)

Sriwijitalai W, Wiwanitkit V
Lien original

Letter from the Editor: Occupational skin disease among healthcare workers during the Coronavirus (COVID-19) epidemic.

In this issue of the JAAD, Lan et al report a high incidence of cutaneous complications related to prevention measures among healthcare workers treating patients with epidemic Coronavirus (COVID-19) infection. It may be difficult to continue wearing protective gear in the face of cutaneous ulceration, and attempts to shift points of pressure and abrasion may reduce the effectiveness of the protective mask. (...)

Elston DM
Lien original

Emerging WuHan (COVID-19) coronavirus: glycan shield and structure prediction of spike glycoprotein and its interaction with human CD26

The recent outbreak of pneumonia-causing COVID-19 in China is an urgent global public health issue with an increase in mortality and morbidity. Here we report our modelled homo-trimer structure of COVID-19 spike glycoprotein in both closed (ligand-free) and open (ligand-bound) conformation, which is involved in host cell adhesion. We also predict the unique N- and O-linked glycosylation sites of spike glycoprotein that distinguish it from the SARS and underlines shielding and camouflage of COVID-19 from the host the defence system. (...)

Vankadari N, Wilce JA
Lien original

Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1 [Article déjà publié en preprint sur medRxiv]

Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1
A novel human coronavirus that is now named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (formerly called HCoV-19) emerged in Wuhan, China, in late 2019 and is now causing a pandemic.1 We analyzed the aerosol and surface stability of SARS-CoV-2 and compared it with SARS-CoV-1, the most closely related human coronavirus.2

Lien original

Early Clinical and CT Manifestations of Coronavirus Disease 2019 (COVID-19) Pneumonia

OBJECTIVE. The purpose of this study was to investigate early clinical and CT manifestations of coronavirus disease (COVID-19) pneumonia.
MATERIALS AND METHODS. Patients with COVID-19 pneumonia confirmed by severe acute respiratory

syndrome coronavirus 2 (SARS-CoV-2) nucleic acid test (reverse transcription-polymerase chain reaction) were enrolled in this retrospective study. The clinical manifestations, laboratory results, and CT findings were evaluated.(...)

Han R, Huang L, Jiang H, Dong J, Peng H, Zhang D
Lien original

Coronavirus Disease 2019 and Transplantation: a view from the inside

Since December 2019, world healthcare community faced with Coronavirus Disease 2019 (COVID-19) outbreak caused by SARS-CoV-2. Due to the high viral contagiousness and the possible transmission during the pre-symptomatic phase, COVID-19 progressively spread to several countries. Currently, Italy is the third Country for number of confirmed cases after mainland China and South Chorea, and the first western nation with a well-established deceased transplant program to tackle a COVID-19 outbreak. (...)

Andrea G, Daniele D, Barbara A, Davide M, Laura A, Paolo R, Alessandra B, Giorgio R
Lien original

Successful recovery of COVID-19 pneumonia in a renal transplant recipient with long-term immunosuppression

he current outbreak of Coronavirus Disease 2019 (COVID-19) has raised great concern worldwide, but its impact on transplant recipients is unknown. We report here the clinical features and therapeutic course of the first reported renal transplant recipient with confirmed COVID-19 pneumonia. This is a 52-year-old man who received kidney transplantation 12 years ago. His overall clinical characteristics (symptoms, laboratory examinations, and chest CT) were similar to those of non-transplanted COVID-19 patients. (...)

Zhu L, Xu X, Ma K, Yang J, Guan H, Chen S, Chen Z, Chen G
Lien original

An Analysis of 38 Pregnant Women with COVID-19, Their Newborn Infants, and Maternal-Fetal Transmission of SARS-CoV-2: Maternal Coronavirus Infections and Pregnancy Outcomes

The emergence of a novel coronavirus, termed SARS-CoV-2, and the potentially life-threating respiratory disease that it can produce, COVID-19, has rapidly spread across the globe creating a massive public health problem. Previous epidemics of many emerging viral infections have typically resulted in poor obstetrical outcomes including maternal morbidity and mortality, maternal-fetal transmission of the virus, and perinatal infections and death. This communication reviews the effects of two previous coronavirus infections - severe acute respiratory syndrome (SARS) caused by SARS-CoV and Middle East respiratory syndrome (MERS) caused by MERS-CoV - on pregnancy outcomes.(...)

Schwartz DA
Lien original

Impact of Coronavirus Disease 2019 (COVID-19) Outbreak on ST-Segment-Elevation Myocardial Infarction Care in Hong Kong, China

Tam CF, Cheung KS, Lam S, Wong A, Yung A, Sze M, et al.
Lien original

Perinatal Transmission of COVID-19 Associated SARS-CoV-2: Should We Worry?

We presented two cases of COVID-19 associated SARS-CoV-2 infection during third trimester of pregnancy. Both mothers and newborns had excellent outcomes. We failed to identify SARS-CoV-2 in all the products of conception and the newborns. This report provided evidence of low risk of intrauterine infection by vertical transmission of SARS-CoV-2.

Fan C, Lei D, Fang C, Li C, Wang M, Liu Y, et al.

Risk Factors of Healthcare Workers with Corona Virus Disease 2019: A Retrospective Cohort Study in a Designated Hospital of Wuhan in China

Corona Virus Disease 2019 (COVID-19) originated in Wuhan, China has caused many healthcare workers (HCWs) infected. Seventy-two HCWs manifested with acute respiratory illness were retrospectively enrolled to analyze the risk factors. The high-risk department, longer duty hours, and suboptimal hand hygiene after contacting with patients were linked to COVID-19.

Ran L, Chen X, Wang Y, Wu W, Zhang L, Tan X

The spread of the COVID-19 coronavirus: Health agencies worldwide prepare for the seemingly inevitability of the COVID-19 coronavirus becoming endemic

While air travel from and to China has subsided and cases of people infected with the COVID-19 coronavirus appear all over the world, virologists, epidemiologists and public health experts are worrying that the virus could eventually become endemic in the human population as it has already spread beyond the Wuhan region where the Chinese government has enforced a strict quarantine.

Hunter P

Clinical outcome of 55 asymptomatic cases at the time of hospital admission infected with SARS-Coronavirus-2 in Shenzhen, China

An epidemic caused by SARS-Coronavirus-2 infection has spread unexpectedly in Wuhan, Hubei Province, China since December 2019. It is rarely reported about asymptomatic cases screened from close contacts. We study epidemiological and clinical outcome of 55 asymptomatic carriers who were laboratory-confirmed positive for the SARS-Coronavirus-2 by testing the nucleic acid of the pharyngeal swab samples. The evidence showed that asymptomatic carriers occurred more often in middle aged people who had close contact with infected family members. The majority of the cases developed to be mild and ordinary COVID-19 during hospital.

Wang Y, Liu Y, Liu L, Wang X, Luo N, Ling L

A 55-Day-Old Female Infant infected with COVID 19: presenting with pneumonia, liver injury, and heart damage

Previous studies on the pneumonia outbreak caused by the 2019 novel coronavirus disease (COVID-19) were mainly based on information from adult populations. Limited data are available for children with COVID-19, especially for infected infants. We report a 55-day-old case with COVID-19 confirmed in China and describe the identification, diagnosis, clinical course, and treatment of the patient, including the disease progression from day 7 to day 11 of illness. This case highlights that children with COVID-19 can also present with multiple organ damage and rapid disease changes. When managing such patients, frequent and careful clinical monitoring is essential.

Cui Y, Tian M, Huang D, Wang X, Huang Y, Fan L

Under the epidemic situation of COVID-19, should special attention to pregnant women be given?

The sudden outbreak and spread of COVID-19 in this spring led to a serious challenge to the global public health system. So far, the number of cases in the mainland of China has exceeded 80,000. In addition to China's neighboring countries like Japan, South Korea, Thailand and India, severe outbreaks have occurred in Italy and many other countries around the world. As dated on 12th Mar., WHO statistics showed that the confirmed cases reported outside China rise to more than 30,000. No epidemiological data on the prevalence and proportion of severe cases in pregnant women has been reported till now. (...)

Jiao J
Lien original

Diagnostic Utility of Clinical Laboratory Data Determinations for Patients with the Severe COVID-19

The role of clinical laboratory data in the differential diagnosis of the severe forms of **COVID-19** has not been definitely established. The aim of this study was to look for the warning index in severe **COVID-19** patients. We investigated forty-three adult patients with **COVID-19**. The patients were classified into mild group (28 patients) and severe group (15 patients). Comparison of the haematological parameters between the mild and severe groups showed significant differences in IL-6, D-Dimer, GLU, TT, FIB and CRP (P <0.05). (...)

Platelet-to-lymphocyte ratio is associated with prognosis in patients with Corona Virus Disease-19

INTRODUCTION: SinceDecember 2019, novelcoronavirus infected pneumonia emerged in Wuhan city and rapidly spread throughout China. In severe novel coronavirus pneumonia cases, the number of platelets, their dynamic changes during the treatment, platelet-to-lymphocyte ratio(PLR)were a concern. We sought to describe platelet feature of these cases. (...)

A guideline for homology modeling of the proteins from newly discovered betacoronavirus, 2019 novel coronavirus (2019-nCoV)

During an outbreak of respiratory diseases including atypical pneumonia in Wuhan, a previously unknown β-**coronavirus** was detected in patients. The newly discovered coronavirus is similar to some β-coronaviruses found in bats, but different from previously known SARS-CoV and MERS-CoV. High sequence identities and similarities between 2019-nCoV and SARS-CoV was found. In this work, we searched the homologous templates of all nonstructural and structural proteins of 2019-nCoV. (...)

The positive impact of lockdown in Wuhan on containing the COVID-19 outbreak in China

With its epicenter in Wuhan, China, the COVID-19 outbreak was declared a public health emergency of international concern (PHEIC) by the World Health Organization (WHO). Consequently, many countries have implemented flight restrictions to China. China itself has imposed a lockdown of the population of Wuhan as well as the entire Hubei province. However, whether these two enormous measures have led to significant changes in the spread of COVID-19 cases remains unclear. (...)

Correlation between travellers departing from Wuhan before the Spring Festival and subsequent spread of COVID-19 to all provinces in China

We found a strong correlation between travel volumes departing from Wuhan, Hubei Province before the Spring Festival and the extent of amplification of the outbreak of COVID-19 in China in 2020, with 100 top cities. Almost 70% of exportations were within cities in Hubei province.

Coronavirus Disease 2019 (COVID-19) in Italy

On February 20, 2020, a young man in the Lombardy region of Italy was admitted with an atypical pneumonia that later proved to be COVID-19. In the next 24 hours there were 36 more cases, none of whom had contact with the first patient or with anyone known to have COVID-19. This was the beginning of one of the largest and most serious clusters of COVID-19 in the world. Despite aggressive containment efforts, the disease continues to spread and the number of affected patients is rising. The case-fatality rate has been very high and is dominated by very old patients. This Infographic shows the most recent statistics emerging from Italy regarding the country's experience with COVID-19.

AMA. 2020 Mar 17. doi: 10.1001/jama.2020.4344. [Epub ahead of print] (e-date: 17/03/2020)
Livingston E, Bucher K
Lien original

Epidemiologic and Clinical Characteristics of 91 Hospitalized Patients with COVID-19 in Zhejiang, China: A retrospective, multi-centre case series [Article déjà publié en preprint dans medRxiv]

BACKGROUND: Recent studies have focused initial clinical and Epidemiologic characteristics on the COVID-19, mainly revealing situation in Wuhan, Hubei.
AIM: To reveal more data on the epidemiologic and clinical characteristics of COVID-19 patients outside of Wuhan, in Zhejiang, China.
DESIGN:Retrospective case series.
METHODS: 88 cases of laboratory-confirmed and 3 cases of clinical-confirmed COVID-19 were admitted to five hospitals in Zhejiang province, China. Data were collected from 20 January 2020 to 11 February 2020. (...)

QJM. 2020 Mar 17. pii: hcaa089. doi: 10.1093/qjmed/hcaa089. [Epub ahead of print] (e-date: 18/03/2020)
Qian GQ, Yang NB, Ding F, Ma AHY, Wang ZY, Shen YF, et al.
Lien original

Coronavirus in pregnancy and delivery: rapid review [Article déjà publié en preprint dans medRxiv]

This is the most up-to-date review of COVID-19 in pregancy, with comparison with previous outbreaks of novel coronavirus in pregnancy. We discuss the limited data available, the limited evidence base for clinical practice, possible therapeutic options in pregnancy and future research.

Ultrasound Obstet Gynecol. 2020 Mar 17. doi: 10.1002/uog.22014. [Epub ahead of print] Review (e-date: 17/03/2020)
Mullins E, Evans D, Viner RM, O'Brien P, Morris E
Lien original

DOCUMENTS GOUVERNEMENTAUX

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COVID-19 : l'ANSM prend des mesures pour favoriser le bon usage du paracétamol

Dans le contexte du COVID-19, l'ANSM rappelle aux patients et aux professionnels de santé qu'en cas de douleur et/ou fièvre, l'utilisation du paracétamol est à privilégier en respectant les règles de bon usage. L'ANSM alerte sur la nécessité de ne pas prescrire, ni délivrer, ni stocker inutilement les médicaments à base de paracétamol.

ANSM (e-date: 17/03/2020)
Lien original

Guidance for health system contingency planning during widespread transmission of SARS-CoV-2 with high impact on healthcare services

This document aims to support public health preparedness planning and response activities when advising healthcare services on approaches on how to increase capacity for managing COVID-19 cases in the context of widespread sustained SARS-CoV-2 transmission in a particular community.

ECDC (e-date: 17/03/2020)
Lien original

Communicable disease threats report, 8-14 March 2020, week 11

The ECDC Communicable Disease Threats Report (CDTR) is a weekly bulletin for epidemiologists and health professionals on active public health threats. This issue covers covers the period 8-14 March 2020 and includes updates on Ebola virus disease, measles, seasonal influenza, COVID-19 associated with SARS-CoV-2 and influenza A(H9N2).

ECDC (e-date: 13/03/2020)
Lien original

CONTRIBUTION DU COMITÉ CONSULTATIF NATIONAL D'ÉTHIQUE : Enjeux éthiques face à une pandémie

Comité consultatif national d'éthique (e-date: 13/03/2020)
Lien original

COVID-19 : procédure pour les kinésithérapeutes

SCENSANO (e-date: 13/03/2020)
Lien original

Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand

The global impact of COVID-19 has been profound, and the public health threat it represents is the most serious seen in a respiratory virus since the 1918 H1N1 influenza pandemic.Here we present the results of epidemiological modelling which has informed policymaking in the UK andother countries in recent weeks. In the absence of a COVID-19 vaccine, weassess the potential role of a number of public health measures –so-called non-pharmaceutical interventions (NPIs) –aimed at reducing contactrates in the population and thereby reducing transmission of the virus. (...)

Imperial College (UK) (e-date: 16/03/2020)
Ferguson NM,Laydon D, Nedjati-Gilani G, et al.
Lien original

Ordonnance 2 sur les mesures destinées à lutter contre le coronavirus (COVID-19)

Confédération suisse (e-date: 13/03/2020)
Lien original

COVID-19: Information and Guidance for Non-Healthcare Settings

Health Protection Scotland (e-date: 17/03/2020)
Lien original

Updated IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals with Suspect or Confirmed COVID-19

Santé publique Ontario (e-date: 12/03/2020)
Lien original

PREPRINTS

A Cryptic Site of Vulnerability on the Receptor Binding Domain of the SARS-CoV-2 Spike Glycoprotein

SARS-CoV-2 is a zoonotic virus that has caused a pandemic of severe respiratory disease—COVID-19—within several months of its initial identification. Comparable to the first SARS-CoV, this coronaviruses surface Spike (S) glycoprotein mediates cell entry via the human ACE-2 receptor, and, thus, is the principal target for the development of vaccines and immunotherapeutics. Molecular information on the SARS-CoV-2 S glycoprotein remains limited. (...)

bioRxiv (e-date: 17/03/2020)
Gordon Joyce, Rajeshwer S Sankhala, Wei-Hung Chen, Misook Choe, Hongjun Bai, Agnes Hajduczki, et al
Lien original

Efficient inactivation of SARS-CoV-2 by WHO-recommended hand rub formulations and alcohols

Efficient inactivation of SARS-CoV-2 by WHO-recommended hand rub formulations and alcohols
The recent emergence of Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) causing COVID-19 is a major burden for health care systems worldwide. It is important to address if the current infection control instructions based on active ingredients are sufficient. We therefore determined the virucidal activity of two alcohol-based hand rub solutions for hand disinfection recommended by the World Health Organization (WHO), as well as commercially available alcohols. (...)

bioRxiv (e-date: 17/03/2020)
Annika Kratzel, Daniel Todt, Philip V'kovski, Silvio Steiner, Mitra L Gultom, Tran Thi Nhu Thao, et al.
Lien original

Comparative Pathogenesis Of COVID-19, MERS And SARS In A Non-Human Primate Model

Comparative Pathogenesis Of COVID-19, MERS And SARS In A Non-Human Primate Model
A novel coronavirus, SARS-CoV-2, was recently identified in patients with an acute respiratory syndrome, COVID-19. To compare its pathogenesis with that of previously emerging coronaviruses, we inoculated cynomolgus macaques with SARS-CoV-2 or MERS-CoV and compared with historical SARS-CoV infections. (...)

bioRxiv (e-date: 17/03/2020)
Barry Rockx, Thijs Kuiken, Sander Herfst, Theo Bestebroer, Mart Lamers, Dennis de Meulder, et al.
Lien original

Recapitulation of SARS-CoV-2 Infection and Cholangiocyte Damage with Human Liver Organoids

Recapitulation of SARS-CoV-2 Infection and Cholangiocyte Damage with Human Liver Organoids
The newly emerged pandemic coronavirus, SARS-CoV-2, has posed a significant public health threat worldwide. However, the mode of virus transmission and tissue tropism is not well established yet. Recent findings of substantial liver damage in patients and ACE2+ cholangiocytes in healthy liver tissues prompted us to hypothesize that human liver ductal organoids could serve as a model to determine the susceptibility and mechanisms underlining the liver damage upon SARS-CoV-2 infection. (...)

bioRxiv (e-date: 17/03/2020)
Bing Zhao, Chao Ni, Ran Gao, Yuyan Wang, Li Yang, Jinsong Wei,et al.
Lien original

The sequence of human ACE2 is suboptimal for binding the S spike protein of SARS coronavirus 2

The sequence of human ACE2 is suboptimal for binding the S spike protein of SARS coronavirus 2
The rapid and escalating spread of SARS coronavirus 2 (SARS-CoV-2) poses an immediate public health emergency, and no approved therapeutics or vaccines are currently available. (...)

bioRxiv (e-date: 17/03/2020)
Erik Procko
Lien original

Evidence of the Recombinant Origin and Ongoing Mutations in Severe Acute Respiratory Syndrome 2 (SARS-COV-2)

Evidence of the Recombinant Origin and Ongoing Mutations in Severe Acute Respiratory Syndrome 2 (SARS-COV-2)

The recent global outbreak of viral pneumonia designated as Coronavirus Disease 2019 (COVID-19) by coronavirus (SARS-CoV-2) has threatened global public health and urged to investigate its source. (...)

bioRxiv (e-date: 18/03/2020)
Jiao-Mei Huang, Syed Sajid Jan, Xiaobin Wei, Yi Wan, Songying Ouyang
Lien original

Cross-reactive antibody response between SARS-CoV-2 and SARS-CoV infections

The World Health Organization has recently declared the ongoing outbreak of COVID-19, which is caused by a novel coronavirus SARS-CoV-2, as pandemic. There is currently a lack of knowledge in the antibody response elicited from SARS-CoV-2 infection. One major immunological question is concerning the antigenic differences between SARS-CoV-2 and SARS-CoV. We address this question by using plasma from patients infected by SARS-CoV-2 or SARS-CoV, and plasma obtained from infected or immunized mice. (...)

bioRxiv (e-date: 17/03/2020)
Huibin Lv, Nicholas C. Wu, Owen Tak-Yin Tsang, Meng Yuan, Ranawaka A. P. M. Perera, Wai Shing Leung, et al.
Lien original

Multiple approaches for massively parallel sequencing of HCoV-19 genomes directly from clinical samples

COVID-19 has caused a major epidemic worldwide, however, much is yet to be known about the epidemiology and evolution of the virus. One reason is that the challenges underneath sequencing HCoV-19 directly from clinical samples have not been completely tackled. (...)

bioRxiv (e-date: 17/03/2020)
Minfeng Xiao, Xiaoqing Liu, Jingkai Ji, Min Li, Jiandong Li, Lin Yang, et al.
Lien original

An emergent clade of SARS-CoV-2 linked to returned travellers from Iran

The SARS-CoV-2 epidemic has rapidly spread outside China with major outbreaks occurring in Italy, South Korea and Iran. Phylogenetic analyses of whole genome sequencing data identified a distinct SARS-CoV-2 clade linked to travellers returning from Iran to Australia and New Zealand. This study highlights potential viral diversity driving the epidemic in Iran, and underscores the power of rapid genome sequencing and public data sharing to improve the detection and management of emerging infectious diseases.

bioRxiv (e-date: 17/03/2020)
John-Sebastian Eden, Rebecca Rockett, Ian Carter, Hossiner Rahman, Joep de Ligt, James Hadfield, et al.
Lien original

Characterization of the SARS-CoV-2 Spike in an Early Prefusion Conformation

Pandemic coronavirus disease 2019 (COVID-19) is caused by the emerging severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), for which there are no efficacious vaccines or therapeutics that are urgently needed. We expressed three versions of spike (S) proteins—receptor binding domain (RBD), S1 subunit and S ectodomain—in insect cells. RBD appears monomer in solutions, whereas S1 and S associate into homotrimer with substantial glycosylation. (...)

bioRxiv (e-date: 17/03/2020)
Shaowei Li
Lien original

Temporal relationship between outbound traffic from Wuhan and the 2019 coronavirus disease (COVID-19) incidence in China

Background: The city of Wuhan is the epicenter of the 2019 coronavirus disease (COVID-19) outbreak and a central Chinese hub for transportation and industry. Mass migration prior to the Chinese New Year may have accelerated the spread of COVID-19 across China. This analysis investigated the temporal relationship between daily outbound traffic from Wuhan and the incidence of COVID-19 in 31 Chinese provinces during January-February 2020. (...)

medRxiv (e-date: 17/03/2020)

Zaixing Shi, Ya Fang
Lien original

Multi-city modeling of epidemics using spatial networks: Application to 2019-nCov (COVID-19) coronavirus in India

The ongoing pandemic of 2019-nCov (COVID-19) coronavirus has made reliable epidemiological modeling an urgent necessity. Unfortunately, most of the existing models are either too fine-grained to be efficient or too coarse-grained to be reliable. Here we propose a computationally efficient hybrid approach that uses SIR model for individual cities which are in turn coupled via empirical transportation networks that facilitate migration among them. (...)

Bhalchandra S Pujari, Snehal M Shekatkar
Lien original

Expected impact of COVID-19 outbreak in a major metropolitan area in Brazil

In January 2020 China reported to the World Health Organization an outbreak of pneumonia of undetermined origin in the city of Wuhan, Hubei. In January 30, 2020, the World Health Organization declared the outbreak of COVID-19 as a Public Health Emergency of International Interest (PHEI). Objectives: The aim of this study is to assess the impact of a COVID-19 epidemic in the metropolitan region of Sao Paulo, Brazil. (...)

Tarcisio M Rocha Filho, Fabiana S. Ganem dos Santos, Victor B Gomes, Thiago A.H. Rocha, Julio H.R. Croda, Walter M Ramalho, et al.
Lien original

Impact of city and residential unit lockdowns on prevention and control of COVID-19

With respect to the asymptomatic transmission characteristics of the novel coronavirus that appeared in 2019 (COVID-19), a susceptible-asymptomatic-infected-recovered-death (SAIRD) model that considered human mobility was constructed in this study. The dissemination of COVID-19 was simulated using computational experiments to identify the mechanisms underlying the impact of city and residential lockdowns on controlling the spread of the epidemic. (...)

Peng Shao
Lien original

Excess cases of Influenza like illnesses in France synchronous with COVID19 invasion.

Several French regions where COVID19 has been reported currently show a renewed increase in ILI cases in the general practice based Sentinelles network. Here we computed the number of excess cases by region and found correlation with the number of reported COVID19 cases so far. These data suggest larger circulation of SARS-CoV-2 in the French population than apparent from confirmed cases.

Pierre-Yves BOELLE
Lien original

Indications for healthcare surge capacity in European countries facing an exponential increase in COVID19 cases

European healthcare systems face rapidly increasing pressure from COVID-19. We calculated pressures on EU healthcare systems by relating both country-specific accumulated COVID-19 deaths (intensity-approach) and active COVID-19 cases (magnitude-approach) to various estimates of hospital beds. On March 14 2020 - relative to Italy on March 11- we found Spain, Luxembourg, Switzerland and France to experience the highest pressure using the intensity-approach, versus Iceland, Denmark, Norway, Sweden, Spain, Switzerland and Slovenia using the magnitude approach.

Frederik Verelst, Elise J. Kuylen, Philippe Beutels
Lien original

Impacts of social and economic factors on the transmission of coronavirus disease (COVID-19) in China

Impacts of social and economic factors on the transmission of coronavirus disease (COVID-19) in China
This paper examines the role of various socioeconomic factors in mediating the local and cross-city transmissions of the novel coronavirus 2019 (COVID-19) in China. We implement a machine learning approach to select instrumental variables that strongly predict virus transmission among the rich exogenous weather characteristics. (...)

medRxiv (e-date: 17/03/2020)
Yun Qiu, Xi Chen, Wei Shi
Lien original

Impact of the contact and exclusion rates on the spread of COVID-19 pandemic

In March 2020, Coronavirus Disease 2019 originating from Wuhan, China, has become pandemic. Based on epidemic data from China we constructed and constrained a simple Susceptible-Infected-Infectious-Excluded (SIIE) model. The model is characterized by only three parameters: average incubation period, contact rate rC, and exclusion rate rE. These two rates control the daily multiplication coefficient β describing epidemic growth in its early exponential phase, during which the number of excluded (confirmed) individuals grows as $E = E0 \exp(\alpha,t)$ with $\alpha = \ln\beta$. (...)

medRxiv (e-date: 17/03/2020)
Marek Kochanczyk, Frederic Grabowski, Tomasz Lipniacki
Lien original

If containment is not possible, how do we minimize mortality for COVID-19 and other emerging infectious disease outbreaks?

If COVID-19 containment policies fail and social distancing measures cannot be sustained until vaccines becomes available, the next best approach is to use interventions that reduce mortality and prevent excess infections while allowing low-risk individuals to acquire immunity through natural infection until population level immunity is achieved. In such a situation, allowing some infections to occur in lower-risk groups might lead to an overall greater reduction in mortality than trying to protect everyone equally.

medRxiv (e-date: 17/03/2020)
Andreas Handel, Joel Miller, Yang Ge, Isaac Chun-Hai Fung
Lien original

Modelling the epidemic 2019-nCoV event in Italy: a preliminary note

An analysis of the time evolution of the 2019-nCoV outbreak event in Italy is proposed and is based on the preliminary data at disposal (till March 11th, 2020) on one side, and on an epidemiological model recently used to describe the same epidemic event in the Wuhan region (February 2020) on the other side. The equations of the model include the description of compartments like Susceptible (S), exposed (E), infectious but not yet symptomatic (pre-symptomatic) (A), infectious with symptoms (I), hospitalized (H) and recovered (R). Further stratification includes quarantined susceptible (Sq), isolated exposed (Eq) and isolated infected (Iq) compartments. The equations are numerically solved for boundary (initial) conditions tuned on the Italian event. The role of quarantine is specifically emphasized and supports the strategies adopted providing a numerical description of the effects.

medRxiv (e-date: 17/03/2020)
Marco Claudio Traini, Carla Caponi, Giuseppe Vittorio De Socio
Lien original

A high efficient hospital emergency responsive mode is the key of successful treatment of 100 COVID-19 patients in Zhuhai

Background: Since December 2019, Coronavirus Disease 2019 (COVID-19) emerged in Wuhan city and rapidly spread throughout China. The mortality of novel coronavirus pneumonia (NCP) in severe and critical cases is very high. Facing this kind of public health emergency, high efficient administrative emergency responsive mode in designated hospital is needed. (...)

medRxiv (e-date: 17/03/2020)
Jin Huang, Zhonghe Li, Xiujuan Qu, Xiaobin Zheng, Changli Tu, Meizhu Chen, et al.

A Cybernetics-based Dynamic Infection Model for Analyzing SARS-COV-2 Infection Stability and Predicting Uncontrollable Risks

Since December 2019, COVID-19 has raged in Wuhan and subsequently all over China and the world. We propose a Cybernetics-based Dynamic Infection Model (CDIM) to the dynamic infection process with a probability distributed incubation delay and feedback principle. Reproductive trends and the stability of the SARS-COV-2 infection in a city can then be analyzed, and the uncontrollable risks can be forecasted before they really happen. (...)

The effects of border control and quarantine measures on global spread of COVID-19

The rapid expansion of coronavirus (COVID-19) has been observed in many parts of the world. Many newly reported cases of this new coronavirus during early outbreak phases have been associated with travel history from an epidemic region (identified as imported cases). For those cases without travel history, the risk of wider spreads through community contact is even higher. However, most population models assume a homogeneous infected population without considering that the imported and secondary cases contracted by the imported cases can pose a different risk to community spread. (...)

Wuhan and Hubei COVID-19 mortality analysis reveals the critical role of timely supply of medical resources

Wuhan and Hubei COVID-19 mortality analysis reveals the critical role of timely supply of medical resources We report that COVID-19 mortality and recovery rates in Hubei Province, China exponentially decays (R2>0.93) and grows (R2>0.95), respectively. A great number of newly supplied medical resources (health workers and beds) enabled overwhelming patients to be treated effectively. This may help other countries to deal with the coming COVID-19 outbreaks.

Blood single cell immune profiling reveals the interferon-MAPK pathway mediated adaptive immune response for COVID-19

The coronavirus disease 2019 (COVID-19) outbreak is an ongoing global health emergence, but the pathogenesis remains unclear. We revealed blood cell immune response profiles using 5' mRNA, TCR and BCR V(D)J transcriptome analysis with single-cell resolution. Data from 134,620 PBMCs and 83,387 TCR and 12,601 BCR clones was obtained, and 56 blood cell subtypes and 23 new cell marker genes were identified from 16 participants. The number of specific subtypes of immune cells changed significantly when compared patients with controls. (...)

International expansion of a novel SARS-CoV-2 mutant

Letter to the editor. There is no abstract. The summary was showed: SARS-CoV-2 has inevitably mutated during its pandemic spread to cause unpredictable effects on COVID-19 and complicate epidemic control efforts. Here we report that a novel SARS-CoV-2 mutation (ORF3a) appears to be spreading worldwide, which deserves close attention.

Comparative Performance of SARS-CoV-2 Detection Assays using Seven Different Primer/Probe Sets and One Assay Kit

More than 100,000 people worldwide are known to have been infected with SARS-CoV-2 beginning in December 2019. The virus has now spread to over 93 countries including the United States, with the largest cluster of US cases to date in the Seattle metropolitan area in Washington. Given the rapid increase in the number of local cases, the availability of accurate, high-throughput SARS-CoV-2 testing is vital to efforts to manage the current public health crisis. In the course of optimizing SARS-CoV-2 testing performed by the University of Washington Clinical Virology Lab (UW Virology Lab), we tested assays using seven different primer/probe sets and one assay kit. (...)

medRxiv (e-date: 17/03/2020)
Amanda M. Casto, Meei-Li Huang, Arun Nalla, Garrett A. Perchetti, Reigran Sampoleo, Lasata Shrestha, et al.
Lien original

Knowledge and perceptions of coronavirus disease 2019 among the general public in the United States and the United Kingdom: A cross-sectional online survey

Background: The behavior of the general public will likely have an important bearing on the course of the coronavirus disease 2019 (Covid-19) epidemic. Human behavior is influenced by people's knowledge and perceptions. Objective: To determine knowledge and perceptions of Covid-19 among the general public in the United States (US) and the United Kingdom (UK). Design: Cross-sectional online survey conducted between February 23rd and March 3rd 2020. (...)

medRxiv (e-date: 17/03/2020)
Pascal Geldsetzer
Lien original

Deep Learning-based Detection for COVID-19 from Chest CT using Weak Label

Accurate and rapid diagnosis of COVID-19 suspected cases plays a crucial role in timely quarantine and medical treatment. Developing a deep learning-based model for automatic COVID-19 detection on chest CT is helpful to counter the outbreak of SARS-CoV-2. A weakly-supervised deep learning-based software system was developed using 3D CT volumes to detect COVID-19. For each patient, the lung region was segmented using a pre-trained UNet; then the segmented 3D lung region was fed into a 3D deep neural network to predict the probability of COVID-19 infectious. (...)

medRxiv (e-date: 17/03/2020)
Chuansheng Zheng, Xianbo Deng, Qing Fu, Qiang Zhou, Jiapei Feng, Hui Ma
Lien original

Serological immunochromatographic approach in diagnosis with SARS-CoV-2 infected COVID-19 patients

An outbreak of new coronavirus SARS-CoV-2 was occurred in Wuhan, China and rapidly spread to other cities and nations. The standard diagnostic approach that widely adopted in the clinic is nuclear acid detection by real-time RT-PCR. However, the false-negative rate of the technique is unneglectable and serological methods are urgently warranted. Here, we presented the colloidal gold-based immunochromatographic (ICG) strip targeting viral IgM or IgG antibody and compared it with real-time RT-PCR. (...)

medRxiv (e-date: 17/03/2020)
Yunbao Pan, Xinran Li, Gui Yang, Junli Fan, Yueting Tang, Jin Zhao, et al.
Lien original

RBD mutations from circulating SARS-CoV-2 strains enhance the structure stability and infectivity of the spike protein

A novel zoonotic coronavirus SARS-CoV-2 is associated with the current global pandemic of Coronavirus Disease 2019 (COVID-19). Bats and pangolins are suspected as the reservoir and the intermediate host. The receptor binding domain (RBD) of the SARS-CoV-2 S protein plays the key role in the tight binding to human ACE2 for viral entry. In this study, we analyzed the worldwide RBD mutations and found 10 mutants revealed high positive selection pressure during the spread. (...)

bioRxiv (e-date: 17/03/2020)
Junxian Ou, Zhonghua Zhou, Jing Zhang, Wendong Lan, Shan Zhao, Jianguo Wu

Mental health status among family members of health care workers in Ningbo, China during the Coronavirus Disease 2019 (COVID-19) outbreak: a Cross-sectional Study

Background: So far, the psychological impact of COVID-19 epidemic among family members of Health care workers (HCWs) in China has been neglected. The present cross-sectional study aimed to investigate the mental health status and related factors of families of HCWs in Designated Hospitals in Ningbo, China. Method: Family members of HCWs working in five designated hospitals in Ningbo, China were recruited between February 10th and 20th, 2020. Information on demographic variables, the COVID-19-related events in the lives, knowledge of COVID-19 and the working status of family members (that is, HCWs) was collected using online self-administered questionnaires. (...)

medRxiv (e-date: 17/03/2020)
Yuchen Ying, Fanqian Kong, Binbin Zhu, Yunxin Ji, Zhongze Lou, et al.
Lien original

A Note on COVID-19 Diagnosis Number Prediction Model in China

Importance: To predict the diagnosed COVID-19 patients and the trend of the epidemic in China. It may give the public some scientific information to ease the fear of the epidemic. Objective: In December 2019, pneumonia infected with the novel coronavirus burst in Wuhan, China. We aimed to use a mathematical model to predict number of diagnosed patients in future to ease anxiety on the emergent situation. (...)

medRxiv (e-date: 17/03/2020)
Yi Li, Xianhong Yin, Meng Liang, Xiaoyu Liu, Meng Hao, Yi Wang
Lien original

A machine learning-based model for survival prediction in patients with severe COVID-19 infection

The sudden increase of COVID-19 cases is putting a high pressure on healthcare services worldwide. At the current stage, fast, accurate and early clinical assessment of the disease severity is vital. To support decision making and logistical planning in healthcare systems, this study leverages a database of blood samples from 404 infected patients in the region of Wuhan, China to identify crucial predictive biomarkers of disease severity. (...)

medRxiv (e-date: 17/03/2020)
Li Yan, Hai-Tao Zhang, Jorge Goncalves, Yang Xiao, Maolin Wang, Yuqi Guo, et al.
Lien original

ARTICLES EN ESPAGNOL (sans résumé en anglais)

Are We Ready for the New Coronavirus?

Arch Bronconeumol. 2020 Mar 11. pii: S0300-2896(20)30069-7. doi: 10.1016/j.arbres.2020.02.009. [Epub ahead of print] (e-date: 11/03/2020)
Peña-Otero D, Díaz-Pérez D, de-la-Rosa-Carrillo D, Bello-Dronda S
Lien original

DOCUMENTS DE PREVENTION

Video on COVID-19: Stay at home! The importance of social distancing

ECDC (e-date: 17/03/2020)
Lien original

Talking Points. Coronavirus (COVID-19). What we are doing to help stop Coronavirus from spreading. Easy Read version

Talking Points. Coronavirus (COVID-19). What we are doing to help stop Coronavirus from spreading. Easy Read version

National Disability Insurance Agency (e-date: 18/03/2020)
Lien original

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