Is anything known about COVID-19 and children with obesity?
*Please see our webinar on April 17.*

It would be great if one of your webinars could focus on impacts of "lockdown" on people with obesity and obesity rates in general population and how to mitigate those.
*Please see our webinar April 9 focusing on patients with obesity in the time of the COVID-19 pandemic.*

What should we advise our patients about NSAIDS use?
*Here is a good blog discussing this:* https://drsue.ca/2020/04/covid-19-should-i-take-ibuprofen-or-other-nsaids/

Is there any information about anti-obesity drugs and COVID-19 infection?
*We have not seen this as the subject of any reports or discussions.*

Are devices for weight loss, such as balloons, safe to employ in the COVID-19 pandemic.
*We would advocate that this is not the time to embark on a weight loss effort. Focus efforts on weight maintenance, healthy diet, staying active, sleep hygiene, getting 10 minutes of sunshine daily and managing stress.*

Does obesity and COVID-19 complication risk affect young and old the same?
The known risk factors for COVID-19 complications are age, male sex, and any disease. There may be interactions. When there is adequate data to examine after the worst of the pandemic is over, we shall probably be able to discover much more about host characteristics that determine outcome of the infection.

Are people with obesity more susceptible to infection with COVID-19? Or is it only more susceptible to complications of COVID-19?
The answer is both. Since my presentation, multiple organizations have released statistics on the percent of people with coronavirus admitted to the hospital and those on ventilators. While early reports provided limited information on obesity, these newer reports show that obesity is among the highest health risk factors for hospitalization and need for ventilation. What remains somewhat unclear is the extent to which “obesity” is also present when other diseases, such as diabetes, are listed.
The data is not yet in on the susceptibility of people with obesity to coronavirus. We know from earlier studies, including comparable viral illnesses, that people with obesity have immune profiles increasing their susceptibility to viral infections. I am certain we will be getting this important information in the coming months.
Rates of obesity in China and in Korea are very low, how does it influence mortality?
You are correct that obesity rates are low in China and other Asian countries. Nevertheless, several recent publications coming out of China indicate that people with obesity are also forming a disproportionate number of hospitalized and ventilated patients. Pre-prints of these articles are on the web; note that BMI levels for overweight and obesity are lower in Asian countries.

Is there any COVID-19 data by ethnicity?
This question may be a bit old because at this point it’s clear that African Americans are by far the largest race/ethnic group admitted to the hospital with coronavirus infections. There are several mechanisms purported to explain these observations ranging from socioeconomic to underlying biological factors, including obesity, diabetes, and high blood pressure. Comment on Seattle: obesity prevalence and mortality. As noted earlier, obesity forms a high percentage of people succumbing to coronavirus. We need to disentangle these findings from race, diabetes, and other risk factors now showing high mortality rates.

Do you think that fat distribution could matter?
Very likely, but no data that I have found yet. Upper body adiposity clearly comes with multiple risk factors associated with an increase in risk; awaiting data that will no doubt come.

Are patients with obesity prone to false positive diagnosis of COVID-19?
While I am not sure, I don’t see a clear reason why this might be the case with good quality tests.

Do you have any information at this time about re-infection of COVID-19?
From what I understand, the “absolute” answer to this question is still somewhat uncertain. Some immunity is acquired following infection, but the degree to which it is fully protective is still being studied. Plasma infusions with antibodies from post-infected patients relies on the hypothesis that people, once infected, have a high level of immunity from re-infection.

Social distancing should be changed to physical distancing as social communication is much needed during these difficult times. Shouldn’t we change this to be more exact with the audience?
Many thanks for your comment. Social distance was used and defined by different international health’s organizations (US CDC, WHO, and others) in the beginning of the pandemic COVID-19. But you are right, we should change to “physical distance”, that was recently changed by WHO, instead of social distance.

Are there any specific foods for fighting corona? garlic or onion?
There are not studies and data about COVID-19 and specific “protective food”. Nevertheless, previous several studies had supported the protective role of dietary patterns (including the Mediterranean diet, the Dietary Approaches to Stop Hypertension diet, the 2015 Dietary Guidelines for Americans, and the Healthy Eating Plate) in the prevention of cardiovascular disease, cancer, type 2 diabetes mellitus, and obesity, all conditions that exacerbate the severity of COVID-19.
Does taking Vitamins like C, D and Zinc help? In obese patients?

No, vitamin supplement has not yet been proven to protect against COVID-19. However, existing evidence indicates that supplements of several nutrients can reduce risk or severity of some viral infections, particularly among people with inadequate dietary sources. Meta-analyses have shown that oral zinc supplementation reduces the incidence rate of acute respiratory infections and improves the rate of recovery. Similarly, vitamin C supplementation was shown to reduce the incidence of respiratory tract infections. Regarding vitamin D, evidence from some studies has shown that vitamin D supplementation lowers the risk of developing acute respiratory tract infections, mainly in individuals with vitamin D deficiency. Considering patients living with obesity, it should be important to encourage to those that had bariatric surgery to continue taking their vitamin and mineral supplementation.

What type of instruments (e.g., online, social networks, etc) are available to help patients monitor diet intake during emergency situations like COVID-19?

There is different heath’s organizations that using their social media, are providing advice and recommendations to the general population and people living with obesity, in relation to healthy diet and nutrition during the actual pandemic of COVID-19. (eg. WHO, EASO)

The struggle against the COVID-19 pandemic and the need for physical distancing takes on deeper urgency in India because our country is estimated to have a large number of individuals not only with obesity but also other underlying health conditions. How do such individuals stay safe from COVID-19? and if such individuals develop COVID-19 what will be the consequences?

According the actual available information, measures taken in other countries should be early adopted in India, including washing hands, physical distance, mask’s use, healthy nutrition, immunization in high risk groups and continue with the usual pharmacological treatment in patients with chronic diseases (eg. anti-hypertensive drugs). People with obesity are already at high risk for severe complications of COVID-19, due the increased risk of the chronic diseases that obesity drives. It emphasizes the need for increased vigilance, priority on detection and testing, support with their diet and mental health and aggressive therapy in those with COVID-19 infection.

Why in Hong Kong were there only 4 deaths from COVID-19 and also few deaths in Singapore and Taiwan?

In Singapore, 1,426 new coronavirus cases were reported on April 20, 2020, mostly among foreign workers, pushing its total number of confirmed infections to 8,014 as of today (April 21, 2020). The city-state now has the highest number of cases in south-east Asia, a massive increase from just 200 infections on 15 March, when its outbreak appeared to be nearly under control. About 3,000 cases have been reported in just the past three days. Migrant workers, a vital part of Singapore’s workforce, now account for at least 60% of its infections. Approximately 200,000 workers from Bangladesh, India and other poorer Asian countries live in tightly packed dormitories. COVID19 infections have spread rapidly in the dorms after they were overlooked in the government’s earlier health measures. In fact, social distancing is impossible in the dormitories, which house up to 20 men per room with a shared kitchen, toilets and other facilities. The government expects cases to rise further as testing at the dorms continues, but hopes that the country’s partial lockdown until 4 May, mandatory wearing of masks and strict social distancing will help curb the spread of the virus. The Singapore government has prepared more health care and isolation facilities to handle a greater number of infections. Therefore, I believe that this rapid surge of COVID19 in Singapore will be controlled.

Is it because of general mask wearing in this Asian countries?

I think so. Wearing a proper mask correctly is essential for preventing spreading of COVID19.
The use of face masks is discouraged in the Netherlands, but just advised by the Korean speaker. Why should we do it or not, and if it is clear we should: what quality and where would we get them? (we already have a shortage problem for health care workers)

Health care personnel (HCP) who are routinely exposed to viral respiratory infections in the workplace may transmit infection to others. Clinicians so called Heath care personnel, wear N95 respirators or medical masks for self-protection, but these masks have different intended uses. N95 respirators are designed to prevent the wearer from inhaling small airborne particles, must meet filtration requirements, and fit tightly to the wearer’s face, limiting facial seal leakage. Medical masks, frequently called surgical masks, are intended to prevent microorganism transmission from the wearer to the patient. Medical masks fit the face loosely and do not reliably prevent inhalation of small airborne particles. However, medical masks prevent hand-to-face contact and facial contact with large droplets and sprays. In summary, N95 respirator is a proper mask, which is designed for protecting against airborne particles, and viruses and bacteria.

What is prevalence of obesity in area of highest COVID incidence in Korea? ie BMI>23
We have now been collecting data about BMI and its relationship with COVID19.

How do you explain the difference in mortality between Asian countries and western countries?
There are several countries showing relatively low mortality rates: Korea and Taiwan among Asian countries and Germany among European countries. We have now been collecting data about BMI and its relationship with COVID19. It is obvious that elderly people show higher mortality than younger people. The proportion of elderly people in all infected patients with COVID19 is an important factor for this difference. Higher rate of wearing a mask also contributes to low infection rate particularly in old generation in some Asian countries.

Early testing and other epidemiologic measures could explain the lower diffusion of Covid-19 in Korea, not the lower mortality rate. Do you use early anti-viral treatment?
Several anti-viral agents have been used to treat COVID19 empirically. But none of them was approved by Korean government. Most treatments are symptomatic therapy. Recently, malaria drugs draw attention in public. Hydroxychloroquine and chloroquine are two medications that have been used for many decades to treat malaria and autoimmune conditions like rheumatoid arthritis and lupus. However, there is not enough medical data at this time to prove that hydroxychloroquine and chloroquine work for COVID-19. A few small studies suggest the medications may be helpful, but other studies failed to show its efficacy. In addition, there have been no studies showing that these medications work for prevention. In summary, we need more data to identify what kind of drug would be helpful for treating and preventing COVID19.

What are the numbers for children, in South Korea?
In April 21, 2020, among total 10,674 patients with COVID19 in Korea, 138 (1.3%) were the subjects aged 0-9 years and 581 (5.4%) were the subjects aged 10-19 years.

What are the implications for people who have had bariatric surgery? Lots of issues of malnutrition/ malabsorption and the various liver etc issues may not be dealt with
We don’t know the implication for people with bariatric surgery. However, in patients with obesity who have undergone bariatric surgery, significant weight loss could increase the risk of severe form of COVID-19 by promoting protein malnutrition. These patients should continue their follow-up (by “teleconsultation” or by “phone”) and importantly take their usual nutritional supplementation in order to avoid vitamin deficiency or protein malnutrition.
In case of unusual abdominal pain, patients undergoing bariatric surgery must consult an emergency room (according to the local instructions given to them after surgery).
For patients with obesity who are on ketogenic diets, is there any risk to continue their diet or are there recommendations to switch to other diet?
We don’t know in the COVID context but it might not be recommended to induce rapid weight loss with risk of malnutrition if there is an infection. There are recommendations in several countries suggesting to avoid rapid weight loss intervention in this context.

Is there any information on immunity and ketogenic diet?
There are information regarding immunity and ketogenic diet in the context of cancer treatment (read this very good review in Curr Opin Clin Nutr Metab Care 2016 “Obesity and Tumor Growth: Inflammation, Immunity, and the Role of a Ketogenic Diet”)

For individuals with obesity and no known comorbidities, does risk for COVID-19 complications decrease?
We need precise information from ICU in different countries but in the recent paper from Simmonet et al (High Prevalence of Obesity in Severe Acute Respiratory Syndrome coronavirus-2 (SARS-CoV-2) Requiring Invasive Mechanical Ventilation, Obesity 2020), the need for Mechanical Ventilation in severe form was BMI, independently of age, diabetes, and hypertension

Do patients with obesity and hyperinsulinemia have increased risk? How many of the effects of obesity on Covid 19 can be attributed to hyperinsulinaemia per se?
We don’t have this information for now.

Considering that the prevalence of heart failure with preserved ejection fraction is relatively high among obese patients, do you think that echocardiography should be part of the evaluation of obese patients with COVID 19?
Interesting point. The detailed information about CV manifestations in COVID-19 is still limited at present. This is detailed in Cardiovascular Disease and COVID-19 betes Metab Syndr 14 (3), 247-250 2020 Mar 25[Online ahead of print]. The author mentions “Acute cardiac injury (with elevation of cardiac troponins, is the most commonly reported cardiac abnormality in COVID-19). Direct myocardial injury due to viral involvement of cardiomyocytes and the effect of systemic inflammation appear to be the most common mechanisms responsible for cardiac injury”. Nevertheless, probably something to follow.

Related to ace inhibitors, if a patient with co-morbidities is taking an immunosuppressant for autoimmune diseases, should they continue and what are the heightened risks?
At present there is no evidence to stop usual treatments for chronic diseases. On March 17, 2020, the American Heart Association, the Heart Failure Society of America, and the American College of Cardiology put out a joint statement advocating for patients to continue ACEIs and ARBs as prescribed and that changes in medications in the setting of COVID-19 should be completed only after careful assessment.