COVID Information and Resources

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The rapid spread of the coronavirus (SARS-CoV-2) and the disease it causes (COVID-19) impacts all of us. On this page we provide some basic information about the virus and the disease with a focus on how it potentially impacts cancer patients. We’ll add to this page as new information becomes available.

What are viruses?

Viruses can be thought of as seeds. The virus particles are extremely small. Much too small to be seen with the naked eye, viruses can be viewed only with electron microscopes. All viruses are contain proteins and genetic material (DNA or RNA). Some also surrounded by a fatty (lipid) layer.

When a virus particle - called a virion - lands on a target cell, the virus binds tightly and enters the cell. Once inside, the virus undergoes a change in shape and begins to hijack the machinery of the infected cell. After infection, the host cell becomes a virus producing factory, releasing more viruses to repeat the cycle.

Different viruses infect different kinds of cells and different kinds of hosts. Some only infect a single species (i.e. only cats or only humans) and some can infect several different kinds of host. Even bacteria have viruses that attack them.

What is a coronavirus?

Coronaviruses are viruses that are known to infect several kinds of animals and to cause disease in humans and animal hosts. The virus' genetic material is RNA and the protein core is surrounded by a double lipid layer (called a bilayer). Sticking out of the lipid layer are proteins that act like magnets to bind the virus to target proteins on host cells.

Different coronaviruses can cause human diseases ranging from mild to very severe. Previous outbreaks of severe disease caused by coronaviruses include SARS and MERS.

The current global outbreak (pandemic) is being caused by a coronavirus that has been named SARS-CoV-2. The name reflects the close relatedness between the current virus and the one that caused the SARS outbreak.

What is COVID-19?

The SARS-CoV-2 virus is spread by droplets released when infected people cough, sneeze, or just breathe out. Those droplets can be inhaled by nearby people or can land on surfaces and then get onto the skin of other people. If the virus-containing droplets come in contact with mucous membranes, the viruses can enter the body and start a new infection in that person.

The virus affects causes fever, pain and difficulty breathing. The problems can be severe enough to cause patients to require a ventilator to assist their breathing. In the US (as of 4/3/20) about 2.5% of confirmed cases (1 in 40 COVID patients), the infections are lethal. The actual percentage of infected people who die is almost certainly much lower because many people are not tested for the virus and it is thought that about 1 in 4 infected people do not show any symptoms.

Are cancer patients at greater risk of getting seriously ill or dying?

Because cancer patients very often have weakened immune systems, they are at greater risk of becoming seriously ill and/or dying from COVID.

COVID Resources

The Centers for Disease Control and Prevention COVID Information Page.