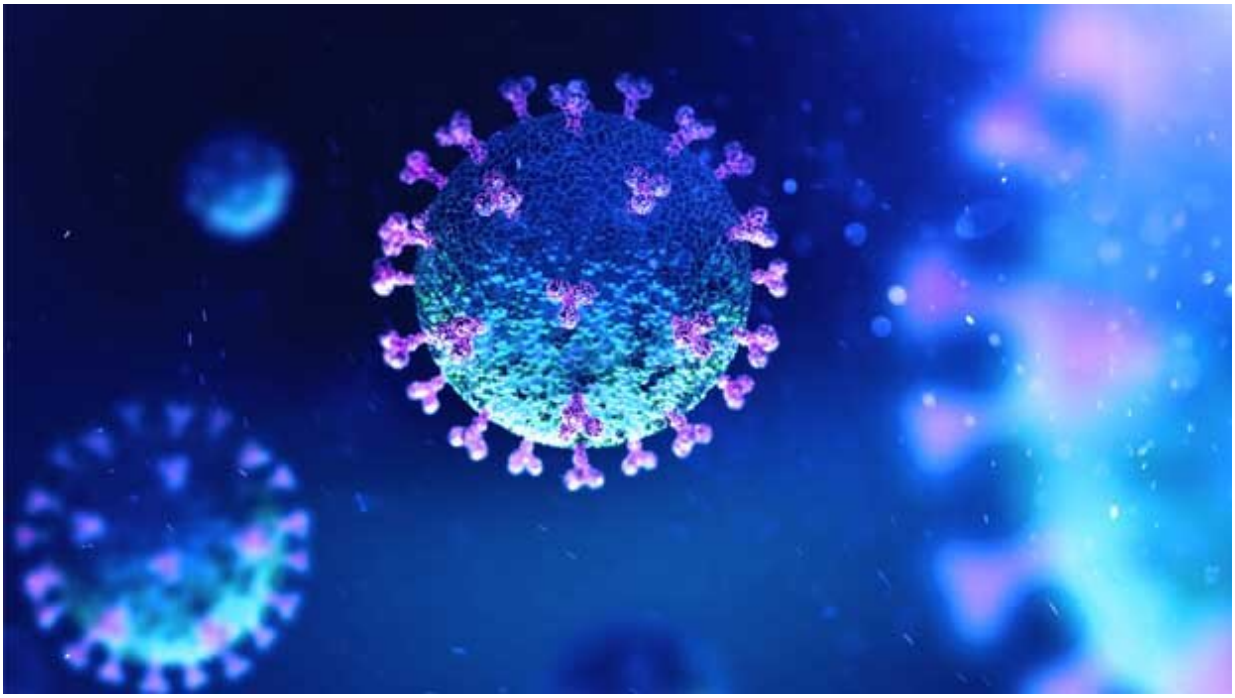
How repurposing a drug in a COVID-19 trial could benefit people with cancer

March 3 2021, by Catherine Pickworth



Credit: Cancer Research UK

People with cancer have been severely affected by COVID-19, with the pandemic impacting how they're diagnosed, treated and cared for.

When the pandemic began, scientists across the UK looked at what they could do to support the COVID-19 efforts—from volunteering in a testing facility to 3-D printing masks.

And with an excellent track record in setting up early stage (phase 1) cancer trials quickly, our Centre for Drug Development were determined to help. Not only did they manage to keep their cancer trials going during the pandemic, but at no extra cost to the charity, they also lent their expertise to fight the COVID-19 pandemic.

In May 2020, Latus Therapeutics approached us, having secured funding worth up to £1m from the medical research charity LifeArc, to set up and run the SPIKE–1 trial. We spoke with Professor Kev Dhaliwal from the University of Edinburgh, chief investigator of the SPIKE–1 trial, which is testing if a drug called camostat can help stop people with COVID-19 developing severe disease and prevent them from deteriorating and being hospitalized.

Repurposing drugs

Dhaliwal, who specializes in respiratory and translational medicine, had been urgently considering potential avenues for COVID-19 treatment.

"There was evidence from scientists in Germany around repurposing a drug, used to treat inflammation of the pancreas, that might also be able to reduce the severity of COVID-19 by blocking an enzyme the virus needs to get into cells. The key aim is to treat as early as possible"

The team immediately started to look at setting up their own studies that could help those who were particularly at high risk of COVID-19 complications, including certain cancer patients whose immune systems may be compromised while undergoing treatment.

The lockdown trial

"Our first hurdle was getting access to potential drugs. We were

introduced to Dr. Bobojon Nazarov, founder of the biotech company Latus Therapeutics, which established the framework for the SPIKE-1 trial, and who knew Cancer Research UK might be able to help through their Centre for Drug Development."

With the backing of LifeArc, Cancer Research UK's drug development expertise and the generosity of Ono Pharmaceutical who supplied the drug free of charge, the team were able to get the trial off the ground.

Dhaliwal says that one of the great things about the study and drug, camostat, is that it can be taken at home as a tablet, which is helpful during a pandemic. They began what Dhaliwal describes as a 'hospital-at-home-trial' – where people take a diary, measure their oxygen levels using a finger clip, their temperature by an ear thermometer and have daily talks with our nursing team. "We hoped the drug would be able to reduce the severity of their symptoms, with the end goal being to prevent them having to go to hospital, and also provide some much needed support at home."

A second hurdle

But once they'd managed to design the trial, and get the team in place, Dhaliwal explains that they came across a second roadblock—letting people know it's happening.

"It's currently open in Edinburgh, Cardiff, Preston and Rhyl, but it's been hard to let people know this is an option." The trial has now been given Urgent Public Health (UPH) status, which means that it's a national priority trial and will get extra support to accelerate recruitment of patients.

"Now that we've got UPH status, we hope this will speed things up, allow us to open the trial to more sites and work out if this drug is as effective

as we hope it could be."

What does this mean for people with cancer?

Dhaliwal says this couldn't be more timely, as he's seen an increase in people presenting with later stage lung cancer in hospital. "I think that's due to several factors; from people not wanting to go to their GP during the pandemic, to delays to some services. It's never been more vital for us to get back on track."

Recent figures suggest that around 40,000 fewer people started cancer treatment across the UK last year and many people are waiting for diagnostic tests, so it's crucial that cancer services recover as quickly as possible to help get through the backlog.

"To do that, we need to reduce the strain on the healthcare services from COVID-19 patients, by reducing hospital admissions and severity of the disease, which we think camostat could help to do."

"The other challenge for cancer patients is that many of them have weakened immune systems, which makes them more vulnerable to severe COVID-19 disease. We're hoping that, if camostat is proven to be effective, it could benefit people who are living with cancer right now by stopping the virus entering their cells."

Still relevant

Dhaliwal stresses that this is part of a multi-faceted approach to tackling COVID-19, and vital to get the country back to normal.

"First is something everyone can do: staying home and staying safe. Second is the vaccination program, and we would encourage everyone

who is eligible to be vaccinated. But the vaccine won't be the answer for everyone—we will also need treatments that reduce the need for hospitalization and prevent death from COVID-19—the third arm of the approach."

Dhaliwal says this is especially relevant to cancer patients who, during this pandemic, have seen first-hand the knock on effect that COVID-19 has had on cancer services within the NHS.

"This drug could offer a real opportunity to minimize the disruption of the pandemic going forward as it could help prevent people with COVID-19 being hospitalized and alleviate pressures on the NHS and help get cancer services back on track."

Looking to the future, the team are excited to increase recruitment. "Our first milestone will be when we managed to recruit and analyze using camostat in 100 patients, to make sure it's safe and effective before looking to roll camostat out more broadly in larger trials and then hopefully into the NHS more broadly."

More information: More information about the SPIKE-1 trial: www.cancerresearchuk.org/fundi … opment-spike-1-trial

Provided by Cancer Research UK

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