Pandemic to delay cancer advances by nearly 18 months, researchers fear

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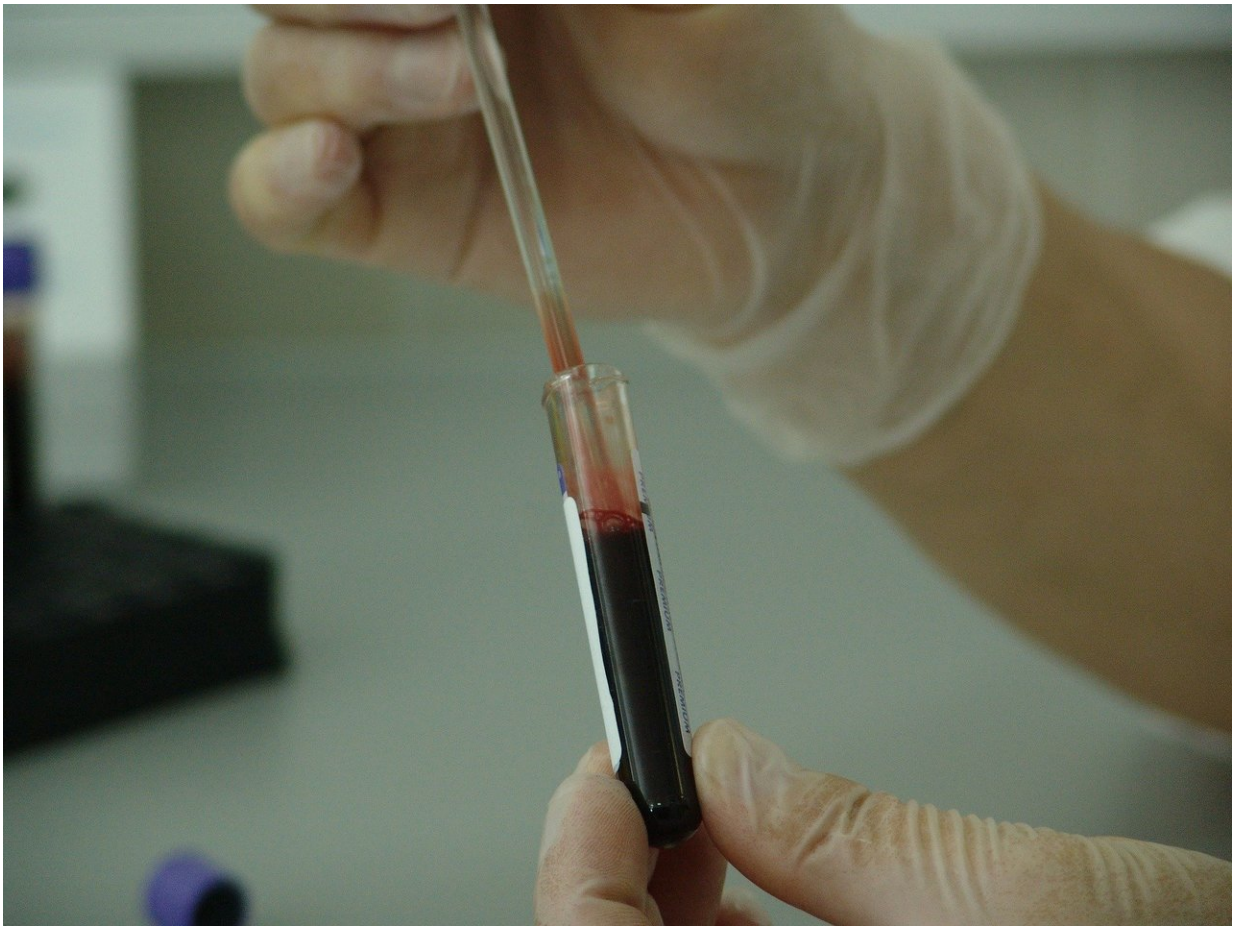

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Cancer researchers fear advances for patients could be delayed by almost

a year and a half because of the effects of the COVID-19 pandemic, a new survey reveals.

Scientists at The Institute of Cancer Research, London, told the survey that their own research advances would be pushed back by an average of six months by the initial lockdown, subsequent restrictions on laboratory capacity and the closure of national scientific facilities.

With broader effects on charity funding, disruption of collaboration and personal interaction between scientists, and diversion of research efforts to COVID-19, the respondents estimated that major advances in cancer research would be delayed by an average of 17 months.

But the researchers said science had now adapted in many ways to the pandemic and that long-lasting damage to cancer research could be mitigated through extra funding from charitable donations or Government support—calling for investment in staffing, new technology such as robotics and computing power.

Making up for lost time

The Institute of Cancer Research (ICR), which has discovered more cancer drugs than any other academic center in the world, has like many research organizations been hit by cuts to its own fundraising income and to grants from other charities. The ICR had to pause much of its work during the initial lockdown, and is now running a major fundraising appeal to help kick-start its research and make up for lost time.

The ICR surveyed 239 of its researchers in order to detail the impact the pandemic has had on its research and to point towards ways of moving research forward again as quickly as possible.

Respondents said they had lost an average of 10 weeks of research time to the first lockdown itself, and that their own scientific advances would be pushed back by an average of six months. Almost all said COVID-19 had had an impact on their work—with 36 percent saying it had had a 'moderate' impact, another 36 percent a 'substantial' impact and 5 percent an 'extreme' impact.

Some 91 percent said the biggest problem had been the closure of labs during lockdown and subsequent restrictions in access to facilities and equipment—citing, for example, closure of major, national research facilities. The average ICR researcher spent 53 percent of their working time in a lab before lockdown, plummeting to 5 percent during lockdown and since recovering to 34 percent.

The next most cited impacts were inability to enroll patients on clinical trials (60 percent), to access clinical samples (46 percent) or to interact in person with colleagues (41 percent) – with video conferencing seen as a poor substitute for meeting in person at conferences and other events.

Keeping labs open to prevent further disruption

Many researchers were, however, able to use the time productively—for example through doing training (48 percent), or carrying out desk-based (62 percent) or computational (33 percent) research. Some carried out research into COVID-19 (5 percent), including studies that have given us greater insight into the effects of COVID-19 on cancer treatment pathways.

But the survey nevertheless laid bare the emotional impact of the pandemic on researchers. Some 69 percent of researchers said the impact of the pandemic on their work had left them 'frustrated," 39 percent had been 'saddened' and 25 percent 'depressed."

The respondents were strongly supportive of efforts to keep labs open to prevent any further disruption to research advances for cancer patients. The ICR's labs have managed to stay open during the second lockdown period while taking significant measures to help prevent risk of spread.

The ICR's researchers did feel that science had adapted to COVID-19 and that there were various ways to make up for lost time—over 60 percent felt funding for extra staff time would help; almost 40 percent wanted upgrades in technology, for example for robotics, and 29 percent increased computing power.

Inspiring to see how researchers have adapted

Professor Paul Workman, chief executive of The Institute of Cancer Research, London, said:

"Our researchers are passionate about making advances to benefit patients, so it has been hugely frustrating that their work has been so disrupted, although also inspiring to see how well they have adapted to the restrictions the pandemic has imposed on our lives.

"It is sobering to see that our researchers are estimating that their own research advances will be delayed by six months—and that the wider impact, because of the interconnectedness of science, is likely to push back major advances for patients by nearly a year and a half.

"Our survey though does provide solutions to mitigate the impact—in the form of investment in staffing, new technologies and computing power. For that, we need more of the generous donations we have been receiving to our emergency appeal, along with a commitment from the Government to help fill the funding gap for the life sciences left by the pandemic."

Impossible to replace the light bulb moments from being together

Dr. Sebastian Guettler, deputy head of structural biology at The Institute of Cancer Research, London, said:

"Our work is reliant on access to shared infrastucture in London and nationally, and during the first lockdown this became impossible. These facilities have now introduced or widened remote access—we can control experiments hundreds of miles away from our own homes, with good broadband internet speeds. But we continue to be limited when it comes to preparing samples in the lab, which are then shipped to these facilities for experiments. It's been an intensely frustrating time, and some teams are much more affected than others—depending on which facilities they need.

"The coronavirus has also reduced or stopped the spontaneous interactions with colleagues that science is so dependent on for generating new ideas. Video conferencing has helped us stay connected as a lab and a community, but it's not a true replacement for those light bulb moments you might get from chatting with someone at a conference or over coffee in the canteen.

"There are some positives from this period. Being able to access shared facilities remotely will be helpful in the future, and we know we can make up for some of the lost time if we have more funding for people and equipment to catch up on the lost laboratory work."

Improving clinical research after COVID

Professor Emma Hall, deputy director of the Clinical Trials and Statistics Unit at The Institute of Cancer Research, London, said:

"Our work relies on new clinical trials starting up and existing ones continuing to happen—and COVID-19 has made that incredibly challenging. The pandemic has meant that it will take longer to answer the questions asked in our trials, and that will delay new treatments getting to patients.

"During the initial lockdown, non-COVID clinical research pretty much shut down within the NHS. A lot of our trials were effectively paused because the hospitals that host them had to redeploy resources to COVID-19 research or treatment.

"COVID-19 has forced some changes in how we work that are for the better though. We can capture and manage data remotely rather than relying on paper. The COVID-19 trials have also shown how research can benefit from easier access to routine medical data—hopefully this will be translated to other clinical research and mean more streamlined, simpler to run trials.

"I hope we can use this experience to benefit cancer patients in the long term, but that will only be possible with more support or future advances will be delayed."

The impact of the pandemic on patients

Mother of two Sally Steadman-South, from Sheffield, is living with stage 4 melanoma. She was first diagnosed in 2014 at the age 35, after having a mole removed on her chest. Despite trying numerous treatments including surgery, radiotherapy and immunotherapy, the cancer continued to spread.

For the last two years she has been on the targeted drugs, dabrafenib—a treatment underpinned by the ICR's science—and trametinib, and currently has no evidence of disease.

This year Sally celebrated her 40th birthday with her family—a milestone she never thought she would reach.

Sally shared her concerns about the impact of COVID-19 on cancer patients:

"The coronavirus has been especially devastating for many cancer patients—I have been lucky my treatment has been unaffected but we know many have not and their care has been affected. It's also clear that future research advances have also been delayed.

"I feel lucky that my treatment has worked well so far but I know that the cancer could become resistant to the drugs at any time. When you get a diagnosis like mine it changes what time means to you—maybe this pandemic has made many more people value and appreciate quality time with family and loved ones. I want to be around for school plays and sports days, see my daughter go to secondary school and see my son enjoy his time there too and start planning his own future.

"We recently went to pick our Christmas tree and they are planting fields of new trees which will be ready in 2028. We agreed that this would be our new goal. I would be there to see this new field of Christmas trees and we would go as a family to pick one. We need to make up for the time lost to this virus so people like me can live longer and make important memories like these."

Provided by Institute of Cancer Research