

In the UK and across the globe, cancer care has been on hold as health systems struggle with the immediate challenge of Covid-19. As services take the first tentative steps towards reopening, **Dr Michelle Tempest**, Partner at Candesic and **Dr Joe Taylor**, Principle at Candesic, examine what measures need to be put in place to ensure safe and timely treatment for patients



Cancer

the forgotten 'C' of the Covid crisis

As we come out of the clouds of lockdown and look towards recovery, there has never been a better time to reflect upon the winners, the losers and the opportunities ahead.

There is much talk about the alphabet of recovery - where the shape of a letter depicts the bounce in demand. For example, hairdressers are expected to be winners, seeing a 'V' shaped recovery with customers returning as doors reopen. The restaurant industry is looking to be more of an 'L' shaped recovery, as income is expected to drop in proportion to the number of covers lost due to physical distancing.

The health and care sector recovery may return as a 'tick' shape.

We predict this with some trepidation, as a surge in care demand will take some strategic and operational gymnastics to get right. Hospitals and care settings have never closed. Staff have been busy working 24/7, donned up in PPE, discovering treatments for the new virus while hospital ICU's encroached on all other specialities. Demand is set to soar beyond previous levels with an NHS waiting lists for routine procedures estimated to be on course to reach 10 million by the end of the year, and getting longer with each SARS-CoV-2 resurgence.

Problem: the wait for cancer care

There has been a cancer onslaught caused by the delay in screening, diagnostics and treatment, including surgery, chemotherapy and radiotherapy, during the peak month of SARS-Cov-2. Pent-up demand has been directly caused by the slow-down. Some areas were victims to routine appointments being stopped in their entirety.

Sadly, late diagnosis will deprive some people of the best odds at beating their disease.

Figure One highlights the 2 million backlog in screening while Figure Two illustrates how 100,000 fewer urgent GP referrals were made in April, following national lockdown.

Around 10% of primary care referrals can confirm a cancer, suggesting there may be 10,000 undiagnosed cancer cases in April alone. The same pattern is seen throughout the world: routine screening fell c.90% in the US during March, compared with the previous three years; Spain's screening, diagnosis and treatment numbers have plunged, and France has seen a 50% drop in cancer diagnosis during its two months of lockdown.

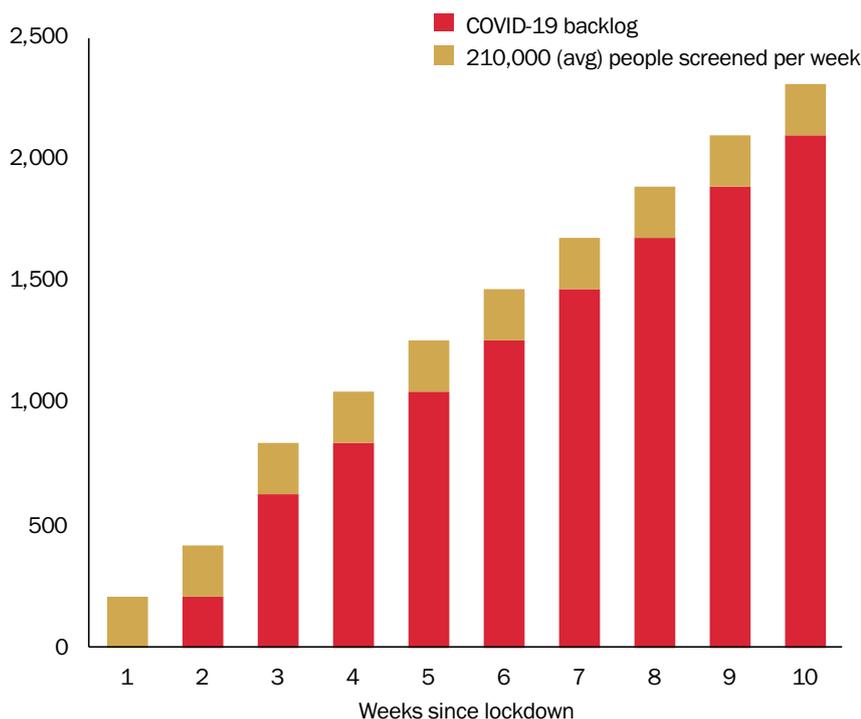
The impact of cancer detection being 'parked' for three months has been studied by DATA-CAN, in conjunction with University College London and The Royal London Hospital. Their model predicts between 7,000 and 36,000 more cancer-related deaths due to the pandemic disruption.

Despite national guidelines stating that cancer treatment must continue, Figure Three reveals there was a 40% drop in cancer surgery, 60% reduction in chemotherapy attendances and a 10% drop in radiotherapy in England.

It's noteworthy that the NHS estimates an average cost of £4,000 per cancer surgery, so clearing the backlog in

FIGURE ONE
THE NHS HAS ACCUMULATED A BACKLOG OF OVER 2 MILLION SCREENING PROCEDURES

CANCER SCREENING BACKLOG IN THE UK, 000s OF PATIENTS



SOURCE NHS DIGITAL; CANDASIC RESEARCH AND ANALYSIS

operations will have a price tag of over £145m.

Despite the fact it's the second largest cancer killer, colorectal cancer screening via colonoscopy is struggling to re-start due to logistical and operational issues. Services such as endoscopy and diagnostic imaging continue to operate below pre-SARS-CoV-2 capacity as appointment times have had to be increased to do the necessary cleaning and disinfecting to keep the environment safe for both patient and staff. All further exacerbating the delay to treatment time.

Clinical cancer trials

Beyond treatments of today, oncology research has also been impacted. This will have knock-on effects by disrupting drug development and delaying future treatments.

Cancer accounts for 30% of all clinical trials (Figure Four). Candesic analysis found that over 20% of oncology trials were halted because of the SARS-CoV-2 impact. Breast, prostate and respiratory being impacted the most (Figure Five) with interventional studies disrupted more than observational studies (Figure Six).

The trial halt is understandable because many cancer patients have depressed immune systems as a consequence of treatments, so had to be shielded during the pandemic. It's clear that clinical trial settings that require bricks and mortar and long patient commutes for check-ups are going to be shaken up. We are already helping some clinical trial companies develop more digital platforms for observational monitoring.

Professor Caroline Springer, director of drug discovery at the CRUK Manchester Institute described how her lab was closed down with only a few hours' notice: 'people in that lab lost years of research as you can't close down a lab in one afternoon without losing vital biological materials and having to throw unfinished projects in the bin.'

Problem solving

Looking forwards to solutions and any silver lining, it is clear that cancer care will become a global health priority.

It's also likely that novel solutions and more partnerships will blossom as the

focus shifts away from SARS-CoV-2 and towards how to match the tsunami of demand.

So, what needs to be done to come through this together?

Focus on clearing the backlog and digital booking systems

Cancer cases which have been building up need safe and efficient services to come back on-line.

It's likely that patients will need to be prioritised. The NHS has already released a guide for giving priority to patients with conditions that are immediately life-threatening or critically unstable, and to interventions that will result in survival gain or improved quality of life.

Digital booking systems are stepping up to the challenge to ensure vital capacity is well utilised. Start-up digital companies such as Zesty and DrDoctor have both made inroads into the £1bn of missed outpatient appointments.

Lloyd Price, co-Founder of Zesty said: 'We are seeing operational pressure build up for our NHS hospital clients and providers across the UK. Acute,

community and specialist cancer hospitals are working hard to balance capacity issues of patient demand and clinical supply. Cancer appointments are more challenging due to urgent referral two-week targets, the many different types of tests or scans patients tend to have in order to find out if they have cancer, followed by the complexity and intensity of treatment where needed.

Tests and treatments are all appointments which need to be planned for, this is where we can help, partnering with hospitals to optimise supply and demand.'

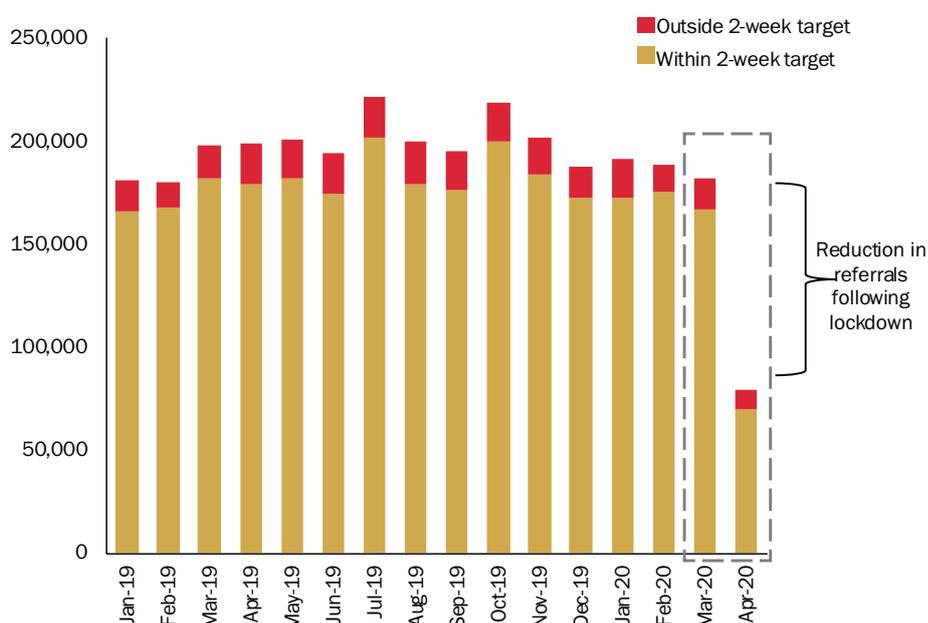
Develop more safe sites

Cancer services need to develop safe sites to prevent more disruption and to keep patients safe from infection.

Fortunately, hospitals in 19 areas of England are operating as 'cancer hubs', including in London, Manchester and Leeds, and SARS-CoV-2 testing has been made available to every patient and staff member at these sites in order to ensure that these sites remain safe.

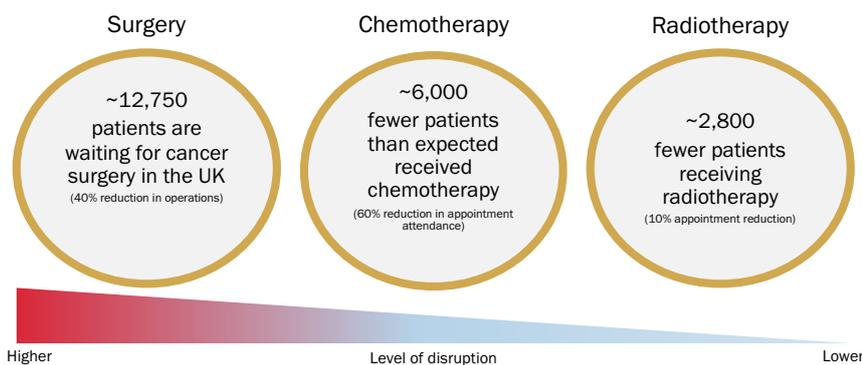
FIGURE TWO
GP REFERRALS HAVE FALLEN DRAMATICALLY POST-LOCKDOWN

TWO WEEK WAIT FROM GP URGENT CANCER REFERRAL TO FIRST CONSULTANT APPOINTMENT, NO. OF PATIENTS



SOURCE NHS DIGITAL; CANDESIC RESEARCH AND ANALYSIS

FIGURE THREE
SURGICAL CANCER TREATMENTS HAVE SUFFERED GREATEST DISRUPTION



NOTE THE STATISTICS ARE CONFOUNDED SLIGHTLY BY THE FACT THAT SOME PATIENTS SCHEDULED FOR SURGERY OR CHEMOTHERAPY HAVE INSTEAD UNDERGONE RADIOOTHERAPY

SOURCE CANCER RESEARCH UK; UCL; CANDESIC RESEARCH AND ANALYSIS

Increasing capacity with mobile units

New capacity will have to be found to help accommodate the backlog of patients.

Thankfully buds of innovation are starting to occur with mobile chemotherapy buses and the fast track rollout of radiotherapy.

Utilising independent sector and more public-private partnerships

It's quite clear that we are going to have

a huge backlog. Therefore, we do need an effective plan to deal with all of the issues that can arise when there is:

(i) a build-up in the system to deal with past and historic omissions; and

(ii) the usual requirements on testing and the usual incidence of cases arising.

'While increased capacity to deal with this is one answer, it will be equally important to utilise all of the tools available to us both in this country (e.g. digital solutions, remote access, PPP, use of alternative facilities) but also to look at skills and ideas coming from other countries who are facing the same issues,' said Hamid Yunis, a corporate &

healthcare partner at McDermott Will & Emery law firm.

NHS England has announced it is accelerating the use of stereotactic ablative radiotherapy (SABR) which requires fewer doses than standard radiotherapy, cutting the number of hospital visits that potentially vulnerable cancer patients need to make.

The independently owned Rutherford Cancer Centres is offering a public-private partnership model for its new centres located in Reading and Northumbria.

This would help capacity restraint of very specialised Proton Beam Therapy.

The single NHS service in Manchester is already full and the UCH London service is yet to open. In this new world order, it's expected to be safer to use units closer to home, rather than travel to the USA for treatment.

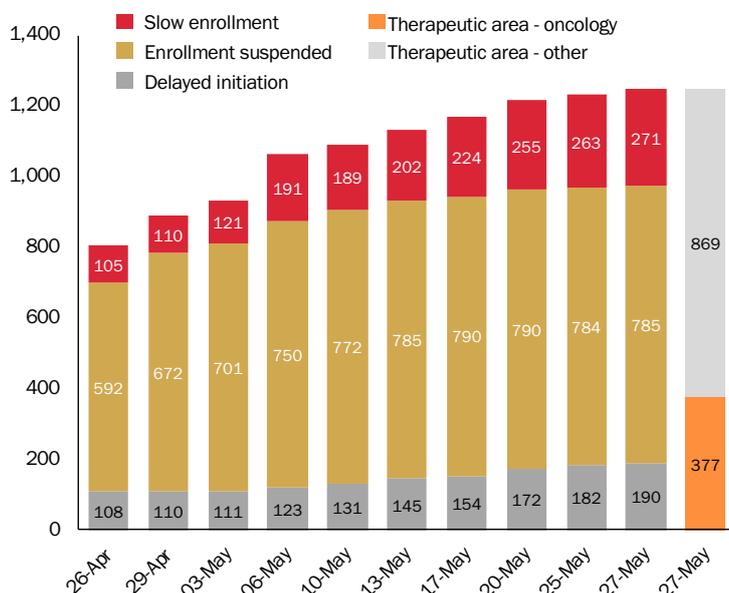
Recruit more staff

Macmillan Cancer Support has already warned that tens of thousands of new specialist staff will be required to deliver such a rebound in demand. As unemployment figures jump, now seems a good time to encourage people to join and train in these vital care settings.

In summary, reminiscent of the famous saying, 'cometh the hour, cometh the man'

FIGURE FOUR
30% OF ONCOLOGY CLINICAL TRIALS HAVE BEEN DISRUPTED BY THE RESPONSE TO SARS-COV-2

CLINICAL TRIALS DISRUPTED BY COVID-19, NO. OF TRIALS

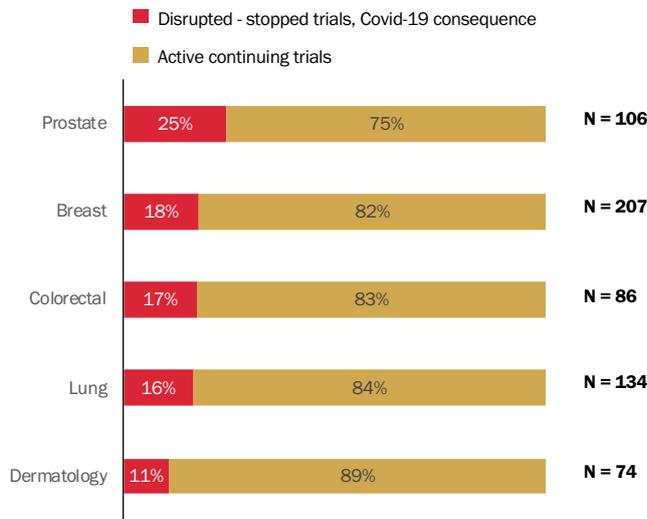


- Oncology clinical trials have faced significant disruption, making up 30% of the total number of trials disrupted
- Many proven and potential cancer treatments compromise the immune system, making subjects more vulnerable to the effects of Covid-19 – postponements are aimed at protecting these people
- The nature of oncology clinical trials involves frequent appointments at hospitals, delaying them meant reducing the risk of infection on staff and patients and allowed diversion of resources to tackling Covid-19
- While difficult to quantify, there are also long term impacts as drug in development will take longer to reach widespread use.

SOURCE GLOBALDATA PHARMA INTELLIGENCE CENTER; CANDESIC RESEARCH AND ANALYSIS

FIGURE FIVE
DERMATOLOGY CLINICAL TRIALS HAVE FACED THE LEAST DISRUPTION AS THEY ARE EASIER TO CONTINUE REMOTELY

ONCOLOGY CLINICAL TRIALS STATUS SPLIT BY CANCER TYPE



COMMENTARY

- Dermatology clinical trials have been the least disrupted, as they are the easiest to digitize,
 - Participants are able to use digital media to report some outcomes to clinicians,
 - Remote monitoring and reporting has allowed many clinical trials to continue.

NOTE ACTIVE TRIALS ARE THOSE MARKED AS 'ACTIVE, NOT RECRUITING' AND WERE LAST UPDATED IN 2020 ON CLINICALTRIALS.GOV
SOURCE CANCER RESEARCH INSTITUTE; CLINICALTRIALS.GOV; CANDESCIC RESEARCH AND ANALYSIS

- this global pandemic requires every care setting in the world to step-up to match the demand spike. It's an exciting time to be part of healthcare, as innovation and investment is urgently required to provide solutions and life-saving interventions. This is the reason we do this job – it's a privilege to be part of the problem solving journey.

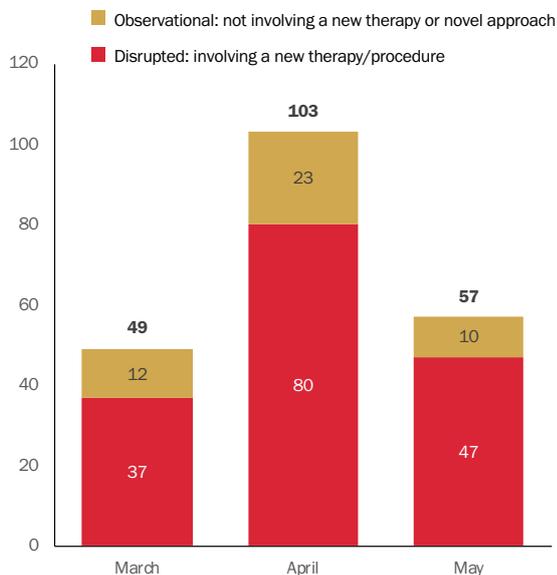
NOTES

- 1 League Against Cancer
- 2 Researchgate, *Estimating excess mortality in people with cancer and multimorbidity in the Covid-19 emergency*. https://www.researchgate.net/publication/340984562_Estimating_excess_mortality_in_people_with_cancer_and_multimorbidity_in_the_COVID-19_emergency
- 3 *BJSS Journals*, Elective surgery cancellations due to Covid-19 pandemic: global predictive modelling to inform surgical recovery plans. <https://bjssjournals.onlinelibrary.wiley.com/doi/abs/10.1002/bjs.11746>

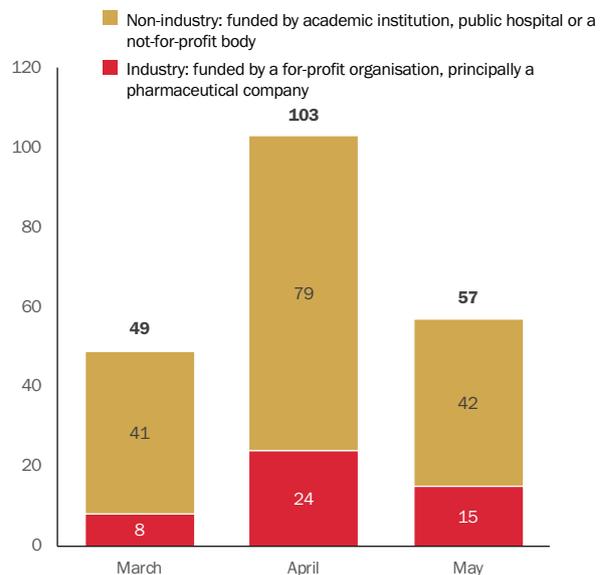
- 4 *The Lancet*, Effect of the Covid-19 pandemic on cancer treatment and research: [https://www.thelancet.com/journals/lanhae/article/PIIS2352-3026\(20\)30123-X/fulltext](https://www.thelancet.com/journals/lanhae/article/PIIS2352-3026(20)30123-X/fulltext)
- 5 Cancer Research UK, *How coronavirus is impacting cancer services in the UK*. <https://scienceblog.cancerresearchuk.org/2020/04/21/how-coronavirus-is-impacting-cancer-services-in-the-uk/>

FIGURE SIX
DISRUPTED STUDIES ARE MAINLY INTERVENTIONAL AND FUNDED BY NON-INDUSTRIAL ORGANISATIONS

ONCOLOGY STUDIES SUSPENDED DUE TO COVID-19, BY **STUDY TYPE**



ONCOLOGY STUDIES SUSPENDED DUE TO COVID-19, BY **FUNDING TYPE**



NOTE TRIALS WHICH HAVE BEEN FUNDED BY INDUSTRY AND NON-INDUSTRY HAVE BEEN CATEGORISED UNDER NON-INDUSTRY
SOURCE CLINICALTRIALS.GOV; CANCER RESEARCH INSTITUTE; CANDESCIC ANALYSIS