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# How cancer services are fighting to counter covid-19's impact

**Behind the headlines of delayed referral, diagnosis, and treatment, clinical teams have been continually adapting care settings and treatment to try to mitigate the impact on patients. They are now preparing for a delayed surge in patients. Emma Wilkinson reports**

Emma Wilkinson *journalist*

For Kathryn Ward, covid-19 has not only meant months of shielding and a cancelled stem cell transplantation for her transformed lymphoma but also, because of the additional uncertainty around her treatment, leaving her job as head teacher of a primary school after a 30 year career.

"The delay has meant that I've had to give up my career. It was the final straw and the deciding factor," she tells *The BMJ*.

As health providers braced for a surge in covid-19 cases by redeploying staff and suspending services, Ward became one of many patients with cancer for whom the pandemic has meant cancelled operations and other treatments, sparking a great deal of anxiety while they wait—and in some cases are still waiting.

Huge levels of disruption were also seen in access to diagnostic tests and referrals for those with suspicious symptoms, and screening programmes were suspended. Cancer Research UK estimated that at the start of June there were 2.4 million people in the backlog for screening, tests, or treatment.[1] Compared with usual activity, the charity predicts that in the 10 weeks after lockdown began, 12 750 fewer patients had surgery, 6000 fewer had chemotherapy, and 2800 fewer underwent radiotherapy.

NHS England data from 11 June showed that the number of urgent GP referrals for cancer dropped by 60% in April compared with the same month last year. Peter Johnson, NHS England national clinical director for cancer, said that at the lowest point cancer surgery was down to 30%. The number of people starting treatment following a GP urgent referral declined by 18% in the same period.[2]

And research carried out for *BBC Panorama* by DATA-CAN, the Health Care Research Hub for Cancer, suggests there could be at least 7000 additional deaths from these delays to diagnosis and treatment—35 000 in a worst case scenario.

Turning these numbers around is going to be no mean feat, but a huge amount of work has been done to get services up and running safely again.

## Patient prioritisation

It wasn't possible to just stop cancer treatment, something they recognised right from the start, says Johnson. "We needed to adapt and make sure it was safe," he says. For surgical teams this meant the consolidation of surgery within 21 covid-19-free hubs—a combination of independent and NHS providers overseen by regional Cancer Alliances, partnerships that were given a leadership role in implementing local care under the NHS long term plan.

"It was very clear very quickly that surgical capacity was going to be constrained," says Johnson, partly because of infection control risk but also because many anaesthetists were redeployed. "Talking to colleagues and clinicians in Italy it was clear that the only way to do this was to plan for covid-19-protected environments where surgery could safely take place."

The idea of covid-19-free—or, more realistically, "covid-19 light"—sites was initially led by a few specialist centres, including the Royal Marsden Hospital in London, before being rolled out across England at the start of May. Measures such as patients having to self-isolate for 14 days before surgery, as well as having a covid-19 test 48 hours before the operation, have kept sites safer. In Wales and some parts of England, independent private sector hospitals have been co-opted as "clean" sites for surgery.

For the first six weeks, as clinicians across the NHS adapted rapidly to remote working, cancer teams focused on how to prioritise those who could not wait. Nicholas Van As, medical director at the Royal Marsden NHS Foundation Trust, says surgical patients were categorised into three groups: the first requiring an operation in the next 24 to 48 hours; the second within the next month; and the third those whose surgery could wait longer. "We were only doing priority one and two at the start—now we are doing everyone," he says.

Even with cancer hubs providing a safe place to carry out surgery, operating while wearing personal protective equipment and infection control procedures mean that teams cannot schedule as many patients as they usually would, so matching demand and capacity is important, explains Johnson.

Radiotherapy departments at the Christie Hospital in Manchester also prioritised patients, initially stopping some treatment altogether. "We had priority lists and got together and decided who really needed to continue treatment and who could defer," says Corinne Faivre-Finn, professor of thoracic radiation oncology at the University of Manchester. That lasted six weeks and the Christie is now operating as normal, as are most departments around the country, she says.

Tim Somervaille, professor of haematological oncology at the Christie NHS Foundation Trust, says initially all but the most urgent chemotherapy treatments were put on hold as the hospital braced itself for a flood of covid-19 patients that never came.

"As soon as it became clear that we weren't going to be overwhelmed we opened up urgent and priority treatments. Bone marrow transplantation has begun again. Chemotherapy is back up and running, which is great news," he says.

Jo Gardiner was relieved that her chemotherapy for a third recurrence of splenic marginal zone lymphoma was able to continue at the Christie. "I was nervous that they'd stop the treatment," she tells *The BMJ*. "I'd have gone along with whatever decision was made but I really hoped they wouldn't cancel or delay."

## Adapting treatment

For the procedures that had to go ahead, adaptation was necessary. To reduce the number of times they had to come to hospital, evidence based guidance on reduced fractionation was new initiatives included a phlebotomy service that allows patients to wait in their car for their turn and arrangements for medicines to be couriered to patients' homes.

This meant working out, on a case-by-case basis, where delayed or less immunosuppressive treatment regimens could be an option. Graham Collins, consultant haematologist at Oxford University Hospitals NHS Foundation Trust, says doctors have had to make difficult judgments around the risks of delaying therapy compared with the dangers of bringing shielded patients into hospital for immunosuppressive treatments.

Others who could not have their operation were sometimes referred to secondary treatments. This is what happened to Kathryn Ward, who says she was "disappointed" to be referred for radiotherapy, having seen her planned stem cell transplantation as "light at the end of the tunnel" after three years of almost continuous treatment. "It's likely that radiotherapy was the second best treatment, but it's still a bit of an unknown," she says, now awaiting a scan that will take place eight weeks after her three weeks of radiotherapy.

Ward lays no blame at the feet of her clinicians. "I did understand that it was beyond anyone's control," she says. "Within the constraints of the system, I did feel that my needs were considered. They gave me an alternative, they reassured me that should it come back very quickly they would do something, and I had a phone number to ring. I felt disappointed but there wasn't another option. I didn't think there was anything they could have done differently.

"I'm really grateful to them because I've not just fallen off the radar."

## Patient reassurance

In the scramble to retool the system, it's patients that should be kept at the forefront of minds. The "stay at home" message caused a great deal of anxiety for patients requiring treatment for cancer. Gardiner, for instance, was nervous about how social distancing would work when she went into hospital.

As a result, a lot of work has gone into offering reassurance. "We've done our best to create confidence that it's safe to come to hospital," says Somervaille. "We have staff and patient entry and exit sites with health questionnaires and we've installed a temperature screening device. All staff wear face masks at all times on the premises."

Staff are regularly tested, not just patients. "All staff can get a covid-19 test up to once a week and now an antigen test," says Collins, "That gives us quite a lot of confidence."

For Gardiner a phone call before her appointments put her mind at ease. "It reassured me about what they were doing to limit risk, so I had a good idea of what it would be like when I went in," she says, "It was reassuring and well managed. On the whole I felt very safe."

## Delayed surge

Services are now grappling with the huge backlog that lack of access to screening, diagnostics, and referrals has generated.

Part of the problem is that patients haven't sought help for suspicious symptoms, thinking that services were closed or because they were afraid to go to hospital in the middle of a pandemic. Joanna Franks, a breast and oncoplastic surgeon at UCLH and a coordinator for the Pan London Breast Hub, says they were only seeing about 40% of their normal referral pattern. "We're up to about 60% now," she says, "But that's still 40% of people at home, not getting treated, and worrying."

Muireann Kelleher, clinical director for cancer at St George's Healthcare NHS Foundation Trust, says their modelling shows most units will be operating between 85% and 100% by July. The data suggest that referrals—after a drop in London of 70%—are starting to pick up again. "If missing patients appear at the same time as a second wave or new ripple of covid-19, that's going to be hard, but we have a plan to keep cancer services protected."

That plan includes not redeploying cancer staff to intensive care where possible and keeping in place covid-19-free pathways for diagnostics and treatment. At St George's they are also rolling out rapid diagnostic clinics, which will screen all referred patients virtually before inviting them to see the most appropriate clinician.

"The rapid diagnosis project was already planned from 2019-20 but it will truly become a covid-19 recovery pathway giving GPs a 'one stop shop' to refer patients to if they're worried about cancer," Kelleher adds.

Azeem Majeed, a GP and professor of primary care at Imperial College London, says work is ongoing to restart oncology services in his area. "At present, all parts of the pathway—referral, outpatient appointment, testing, and treatment—are still delayed compared with earlier in the year before the pandemic," he says.

Franks is concerned about less urgent treatment continuing to be squeezed. "Time critical things will get done. But there are other things that aren't necessarily so visible but are important to each patient's treatment," she says. "For breast cancer, for example, that would be things like doing further work to improve aesthetics or making sure that we've done the symmetrising surgery. In the recovery phase we need to work out how we're going to do all these things."

Major UK cancer charities, including Cancer Research UK, Macmillan Cancer Support, Breast Cancer Now, and Bowel Cancer UK, have published a 12 point plan for the restoration, recovery, and transformation of cancer services[3] and called for the government to support the NHS in setting out a clear plan.

In response to this call, a Department of Health and Social Care spokesperson said, "The NHS has adapted how it runs its cancer services to ensure the safety of both patients and staff. This includes establishing dedicated cancer hubs for urgent treatment and diagnosis which are separate from hospitals dealing with covid-19."

For Richard Johnson, consultant breast surgeon and Royal College of Surgeons director in Wales, the key will be finding a way to cope with the expected extra demand, given operating lists will have to be shorter. "The main message is even if you turned on all the capacity you had before you would not be able to treat the same number of patients. You need extra capacity to make up for that," he says.

And planning is not straightforward because it's hard to plan too far ahead. "Throughout the past three months, what I imagined would be the case two or three weeks later didn't turn out that way," says Somervaille. "We need to be as flexible as possible."

**Swansea team pioneers regional anaesthetic technique to continue sentinel node biopsies during pandemic**

A team of anaesthetists and plastic surgeons from Swansea's Morriston Hospital has developed a regional anaesthetic technique to enable them to continue carrying out sentinel node biopsies in the armpit for patients with melanoma during the pandemic. They believe it is the first time the technique has been used for this surgical indication.

The biopsies are usually carried out under general anaesthetic and therefore the procedure was suspended because of the additional risk to the patient during the pandemic. General anaesthetic is also an aerosol generating procedure and therefore high risk for clinicians.

Morriston's plastic surgeons "challenged" their anaesthetist colleagues to establish whether the operation could be done using regional nerve blocks, local anaesthesia not being suitable. They responded—trawling the literature and with consultant anaesthetist Christian Egeler even practising on himself—by developing a blocks combination of upper limb (brachial plexus) and chest wall (deep serratus plane plus PECS 1 or 2, depending on the patient's needs).

Until that point, consultant plastic surgeon Jonathan Cubitt explains, "the armpit has been a sort of no-go-zone from a blocks point of view. We would have always done it under a general anaesthetic."

With around 20% of sentinel node biopsies returning a positive result that requires further treatment for the melanoma spread, Cubitt explains, being able to continue the procedure potentially reduces the risk that these patients will discover more serious disease later on, with a consequently worse prognosis. "It's made it possible for us to do the operation that we want to. We didn't want to give someone an operation that wasn't the gold standard that we would be doing under general anaesthetic. They're having the same operation, just under much safer conditions."

The team sees itself continuing with the regional block technique beyond covid-19, to avoid the usual risks, inconveniences, and recovery time of general anaesthetic. "I don't see a reason to routinely go back to doing general anaesthetics when we know this works," says Cubitt. "It must be better to avoid giving everyone a general anaesthetic."

The team members are therefore writing up their findings, with a view to spreading the technique. "The patients have been very complimentary," says consultant anaesthetist Ceri Beynon. "It's always good to be challenged as a medic to do something new."

"Covid-19 has made us think outside the box and provided us with a treatment that is great for these patients," agrees Cubitt. "This is a great thing to come out of a bad situation and it will impact on our practice going forward."

**Patient perspective: "Having my ovarian cancer surgery postponed for four months was difficult but I understood the decision"**

I was diagnosed with ovarian cancer in September and the plan was to have six cycles of chemotherapy split into three and three with an operation in Nottingham in the middle. The ultra-radical (extensive) operation had already been delayed because, after I had my first round of chemotherapy in November, I was hospitalised with an infection around my appendix and I had to be treated in Lincoln for a month before chemotherapy could be resumed.

The operation was booked for the end of March but then, because of coronavirus, the expert surgical team at Nottingham City Hospital had to cancel it. I understood that decision and I would not, in my view, have survived covid-19 because I was so vulnerable. It was difficult because I'd been preparing for it and because it's such a big operation you really have to want to do it and believe it's your best chance.

I've now had six cycles of chemotherapy and Lincoln have reorganised services locally so I went to Grantham for the final one. It's been worrying but everyone, both in Lincoln and Nottingham, has been understanding and provided ways to keep in touch.

After the delay I had to go through triage again to make sure the operation was still appropriate, including having a laparoscopic investigation. My surgery is now booked for the end of July. I'd hoped it might be sooner but because the surgery is so complex and you need intensive care they need to make sure everything is in place. They've worked hard to get their services going again.

I have a peripherally inserted central catheter line and I have to go to the hospital every week to have it flushed out and even that little bit of contact and regular treatment has kept me going. I've had moments of being negative, but I've been able to think it through and rationalise it. I'm lucky that we have a good oncology team here and access to specialist surgery. I feel most sorry for those who haven't been to their GP because maybe they feel that they won't be able to get treatment.

Diana Scammell, 68, Lincoln, UK

**Patient perspective: "I didn't want to bother my GP in lockdown—but then I was diagnosed with stage 4 testicular cancer"**

One week into lockdown, I was diagnosed with stage 4 testicular cancer. I found an abnormal growth but rather than bother the GP straight away I waited a few days. When I called they said because I didn't have any abdominal pain it could wait. Five days later I had horrendous pains in my stomach so called 111 and they told me to go straight to the emergency department.

I went to Kingston Hospital and they moved quickly to do an x ray and I moved from one doctor to the next and the last one was an oncologist. I was back for a scan the following morning and they immediately referred me to the Royal Marsden Hospital. I went from diagnosis to starting treatment in nine days. Looking back, it was stupid of me not to push to see the GP but, because of everything going on, I didn't want to bother them.

The consultant fully explained their plan which involved some minor tweaks to one of the chemotherapy drugs because of the pandemic. It was all very quick, including a trip to the sperm bank, and I can't fault them on anything. They explained that in normal circumstances they would remove the testicle first and then do chemotherapy but for me the safer option was to start chemotherapy as quickly as possible and have the surgery later.

I'll be having four cycles over 12 weeks and I go in for six days and have 18-19 hours of chemotherapy a day. After a two week break, I'm in for the next one.

I'm shielding, as is my girlfriend who I live with, and going into hospital was a bit scary in a pandemic but they have had very stringent rules. You have a covid-19 test before you go back in for a cycle of treatment and they've split the wards into zones.

They've done their absolute best in a horrible situation. You can't believe the care they take with each patient. I can only describe it as absolutely amazing.

Karl McBride, 29, Surbiton, London, UK

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Additional reporting by Jennifer Richardson

1 Cancer Research UK. Over 2 million people in backlog for cancer care. 1 June 2020. www.cancerresearchuk.org/about-us/cancer-news/press-release/2020-06-01-over-2-million-people-in-backlog-for-cancer-care.

2 NHS England. Waiting times for suspected and diagnosed cancer patients for April 2020. 11 June 2020. www.gov.uk/government/statistics/waiting-times-for-suspected-and-diagnosed-cancer-patients-for-april-2020.

3 Cancer Research UK. Covid-19 and cancer: a 12 point plan for restoration, recovery, and transformation of cancer services. June 2020. www.cancerresearchuk.org/sites/default/files/covid_and_cancer_12_point_plan_ocv_-_final.pdf.