

## Research Communication

# Delivering safe and timely cancer care during COVID-19: lessons and successes from the transition period

The pandemic caused by COVID-19 has caused significant strain on healthcare professionals across the globe. Without downplaying the devastating effects of the virus itself, the collateral damage, specifically in cancer care, has only compounded an already difficult time in medicine [1]. Previously protected by cancer treatment targets, cancer patients across the country found their care halted by coronavirus as hospitals cancelled elective clinics and operating lists to redeploy staff. Resources aside, a second challenge for those that continued with services was how to minimize the patient's risk of spreading or contracting coronavirus. Almost half of patients with concurrent COVID-19 infection experienced postoperative pulmonary complications, and so it is imperative that we shield our patients as best as we can [2].

At the Royal Surrey NHS Foundation Trust, we implemented a number of steps to ensure both the safety of our patients and the care of our cancer patients in a difficult time. After the lifting of the first lockdown we registered the present audit to critique our outcomes in pelvic oncology in accordance with local governance protocols. Our renal cancer patients are referred to a local tertiary centre and therefore were not included in this audit.

Like other centres, we utilized a local private hospital in order to deliver our elective surgical service. We acknowledge, however, that a key factor in our favour was the proximity of our local private Nuffield hospital (GN), which is directly connected to the primary trust day-case operating theatres. From 6 April 2020, at the beginning of the pandemic, two Xi Da Vinci robots were relocated to GN which was to be used as a 'COVID-19-clean' site at which to deliver elective robotic surgery, alongside other procedures.

## Staff

Staff to patient transmission was an acute concern throughout. To combat this, non-surgeon staff were divided between the two sites, with those working at GN having a weekly PCR swab test. Results were available within 48–72 h. All theatre staff were dedicated to GN and did not work at the main hospital. Surgeons' work was divided, with a weekly alternating pattern of working at GN or at the main hospital site. All surgeons were also swabbed weekly on Fridays in preparation for their week at the 'COVID-19-clean' GN site. None of our staff members received positive swab results during this time.

## Outpatient Care

All outpatient care was diverted to telephone consultations as of 23 March 2020. For those that required clinical examination or flexible cystoscopy, face-to-face review remained available, with staff wearing standard personal protective equipment (PPE). Patients attending appointments were advised to wait in their car before being contacted to attend the appointment, to reduce numbers in the department. Patients completed COVID-19 screening questionnaires by telephone prior to attending, as well as a questionnaire on arrival. Face-to-face outpatient care took place in the urology centre, which has a separate entrance to the main hospital.

## Elective Care

National guidelines were followed for patients, such as COVID-19 symptom screening (by telephone and on arrival), two-week isolation, and preoperative nasopharyngeal swabs within 72 h of surgery [3].

On admission each patient had a separate side room. Both morning and afternoon surgery patients were admitted at 08:00 h. No holding bay in theatre was used and patients were wheeled directly into theatre for their anaesthetic. As per Public Health England COVID-19 infection control policy, minimal staff numbers were present in theatre and all theatre staff wore PPE for the duration of each procedure. Where appropriate, an airseal port confined carbon dioxide plume.

As a tertiary robotic centre, our enhanced recovery pathway is well established and, where possible, we continued to adhere to it. Patients undergoing robot-assisted radical cystectomy undertook prehabilitation to optimize cardiorespiratory function. Patients were optimized preoperatively, including management of anaemia and encouraging exercise. For stoma education a video was produced for patients who were unable to meet face to face with the stoma nurse preadmission. As standard, carbohydrate preload was given preoperatively, with early mobilization and removal of drains postoperatively in order to ensure a safe and timely discharge.

To audit our outcomes we reviewed all operations performed from March to June 2020 and August to November 2019. This was registered as a local audit in accordance with local

governance protocols. We also collected cancer targets data for bladder and prostate.

Table 1 provides the operative and referral data for the aforementioned timelines.

## Prostate

In total, we received 80 referrals for possible prostate malignancies between March and June 2020, and 150 between August and November 2019. The number of days to MRI was slightly reduced in March to June, but we did not find a statistical difference. We found a statistically significant decrease in the number of days it took for a patient to go from referral to diagnosis. Furthermore, we also improved on the proportion of patients who had their diagnosis told to them within 28 days, from 74% to 87%.

## Bladder

In total, we received 134 referrals for possible bladder malignancies between March and June 2020, and 81 between August and November 2019. We improved on days to outpatient appointment (OPA) for patients and time to flexible cystoscopy, with both results carrying statistical significance; we were able to reduce time to OPA from 8 to 6 days, and time to flexible cystoscopy from 26 to 12 days.

## Discussion

There were a total of 369 cancer operations performed at our trust between March and June 2020. These can be broken down into 120 robot-assisted, 36 endoscopic cases and seven

open surgeries. In addition, 106 biopsies were performed, and 100 patients had brachytherapy seeds implanted.

To offer a comparison, in the same time frame from August until November 2019, we performed 407 cancer operations: 124 robot-assisted, 24 endoscopic and six open surgeries. During that period, 117 patients had biopsies, and 136 had brachytherapy seeds implanted. Whilst we acknowledge that a comparison between March and June 2019 would have been preferable, the Royal Surrey NHS Foundation Trust formally opened its dedicated urology unit on 5 March 2019, offering both a dedicated brachytherapy theatre as well as additional outpatient capacity. It was felt that an audit that did not take into account the new facilities at their prime would not offer a fair comparison.

No patient was readmitted with symptomatic COVID-19 after discharge for elective surgery. Unfortunately, no data regarding COVID-19 infection that did not result in admission are available, as widespread community testing was not available for the entirety of the period audited.

Interestingly, there were significantly more bladder referrals during the 'COVID-19' period, with the opposite true for prostate referrals. We do not yet have the data to establish how that compares with other centres. Regardless, there was a statistically significant reduction in the time from referral to diagnosis for prostate referrals, and a similar finding in reduction for days to OPA and time to flexible cystoscopy for bladder referrals. This is probably attributable to increased clinician availability for outpatient activity, due to limitation in the number of theatre lists dedicated to benign cases. At our trust, both flexible cystoscopy and prostate biopsies are performed under local anaesthetic in an outpatient setting. This would explain the reduction in time to diagnosis.

We acknowledge that our cystectomy numbers did decrease during the COVID-19 period. Whilst our 'in-house' bladder cancer referrals for cystectomy did increase, the number from our feeding hospitals declined significantly. We did not explore our data for referrals from other hospitals but we can speculate that there were potentially delays in the 2-week wait processing at these centres. It appears at the time of writing that we are now seeing a subsequent increase in referrals from these centres, likely to compensate for this.

This retrospective study demonstrates that, with appropriate re-allocation of resources, we can continue to safely meet cancer targets. Our findings reflect those published by Paramore et al. [4], who studied their cohort of 52 patients in a similar time frame. Similar findings were identified by the COVIDSurg collaborative [5]. That international multicentre paper also concluded that COVID-19-free surgical sites offered safer elective surgery.

Our experience demonstrates that, by regular staff and patient testing, maintaining a 'COVID-19-clean' site for surgery, and

**Table 1** Prostate and bladder referrals in the two audit periods



Prostate	August–November 2019	March–June 2020	P
Number of referrals	150	79	
Days to MRI			
Median	4	4.5	0.363
IQR	3–6	3–5	
Time from referral to diagnosis, days			
Median	13	9	0.017
IQR	7–22	6.25–16.75	
Bladder	August–November 2019	March–June 2020	P
Number of referrals	81	134	
Days to OPA			
Median	8	7	0.013
IQR	7–10	4–8	
Time to flexible cystoscopy, days			
Median	24	11	<0.001
IQR	20–28	8–16	

*IQR, interquartile range; OPA, outpatient appointment. A Mann–Whitney U-test was used to compare means for bladder and prostate data. P values < 0.05 were taken to indicate statistical significance.*

utilising appropriate PPE, hospitals can continue to provide safe and timely care to their cancer patients. We understand that we were fortunate to be in such close proximity to a private hospital, but by early utilisation in a constantly changing environment we were able to uphold the high standards that we continuously strive for. As we head towards a second wave, it is more important than ever that cancer care continues throughout to prevent the very real risk of cancer patients becoming the second cohort of victims in this pandemic.

## Conflict of Interest

None declared.

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