

Supporting better quality health and social care for everyone in Scotland

COVID-19 National Cancer Medicines Advisory Group
(NCMAG) Programme

COVID-19 NCMAG Evidence of Impact Report 2021/2022

September 2022

Table of Contents

Background	1
Methods.....	2
Findings	5
Quantitative data on usage of supported treatments across Scotland	5
Qualitative data on perceptions of impact.....	7
Clinician Perspective Impact on patient care	7
Clinician Perspective Broader impact on cancer services.....	7
Patient Perspective Concerns about COVID-19 infection.....	9
Patient Perspective Experiences of being treated with a COVID-19 NCMAG supported treatment	10
Cancer Manager Perspective General perception.....	10
Cancer Manager Perspective Utility of budget impact tool	11
Single site audit of impact of granulocyte colony-stimulating factor (GCSF) use	12
Summary of findings.....	13

Background

The COVID-19 NCMAG was established early in the pandemic to provide peer-reviewed, evidence-based rapid national decisions regarding the use of cancer medicines (often off-label) that might reduce risk of infection to patients or reduce burden on cancer services during the pandemic. Of the 30 proposals reviewed by the group, 20 were approved and implemented and provisional data suggests widespread uptake of the advice, including high-volume cancers. In October 2020 a survey was conducted which asked COVID-19 NCMAG advice users five questions on their awareness and use of the advice. This report has previously been shared with the National Cancer Recovery Group.

In order to provide an up to date impact assessment for Scottish Government, four key COVID-19 NCMAG supported treatments were selected and usage data, alongside anecdotal evidence from clinicians and patients prescribing/receiving these treatments was collected and reported. Summary findings from a single centre report on the impact of another COVID-19 NCMAG supported medicine is also presented (see Table 1 for details of these five treatments referred to in this report).

Methods

Four COVID-19 NCMAG supported treatments were selected, both to capture the spectrum of intended applications and impacts and due to availability of data on these treatments from the Chemocare® system. A mixed method approach was adopted. Usage data for the four treatments, from the date the advice was issued to 31st October 2021, was requested from each of the three regional cancer networks and compared to predicted usage extracted from the COVID-19 NCMAG proposal forms.

Feedback forms were developed and sent to representative oncologists/haemato-oncologists, patients (identified by clinicians) and cancer managers across the three cancer networks, to collect qualitative data on their perception of the COVID-19 NCMAG supported advice.

Qualitative data was collected in November 2021. Data was summarised and, where appropriate, synthesised and interpreted in the context of the findings from the previous user survey conducted in October 2020 (n=30 respondents). Patient feedback for the COVID-19 NCMAG supported medicines encorafenib / cetuximab and pembrolizumab (see Table 1), obtained during the piloting of feedback forms is also included.

Summary results from a comparative audit of admissions for chemotherapy related infections in lung cancer in South East Scotland Cancer Network (SCAN) before and after COVID-19 NCMAG 002 advice is also presented.

Sub-set of COVID-19 NCMAG supported treatments

COVID-19 NCMAG No.	Interim treatment	Indication	Service impact (COVID-19 context)	Patient impact (COVID-19 context)
COVID-19 NCMAG001	Abiraterone acetate with prednisone or prednisolone	Newly diagnosed low risk metastatic hormone sensitive prostate cancer	Oral regime which avoids the requirement for intravenous administration of chemotherapy in hospital	Reduced risks related to immunosuppression The abiraterone regimen is considered to have a favourable adverse event profile compared to docetaxel with a similar effect on overall survival
COVID-19 NCMAG002	Granulocyte colony-stimulating factor	Patients receiving cytotoxic Systemic Anticancer Therapy	Reducing the risk of requiring a hospital admission for neutropenic sepsis	Prevent neutropenia and reduce the risk of sepsis
COVID-19 NCMAG017	Ibrutinib	Previously untreated chronic lymphocytic leukaemia	Oral regime which avoids the requirement for intravenous or subcutaneous administration of chemoimmunotherapy in hospital Fewer monitoring requirements, and reduced demand on clinician, nursing and pharmacy resource	Reduced hospital visits Regimen is likely to reduce risk of COVID-19 transmission in this patient group

COVID-19 NCMAG023	Pembrolizumab	Microsatellite instability high/mismatch repair deficient (MSI-H/dMMR) metastatic colorectal cancer	Less intensive regimen will reduce overall capacity requirements, with less frequent administration and shorter infusion times	Patients will require fewer treatment administrations and significantly shorter administration time with pembrolizumab compared with the current standard of care options
COVID-19 NCMAG025	Pembrolizumab and Axitinib	First-line treatment of intermediate and poor risk advanced renal cell carcinoma in adults	Fewer hospital visits for treatment requirements for clinic time, pharmacy preparation and nursing time compared with the current standard of care	Requires fewer and shorter hospital visits Reduces the risk, to this vulnerable patient group, of contracting COVID-19
COVID-19 NCMAG027	Encorafenib and cetuximab	Patients with metastatic colorectal cancer with a BRAF V600E mutation, who have received prior systemic therapy	Less toxicity in relation of immunosuppression, therefore less hospital admissions relating to adverse events	Less frequent hospital visits for a shorter duration compared to standard of care

Findings

Quantitative data on usage of supported treatments across Scotland

Quantitative data obtained from Chemocare® in West of Scotland Cancer Network (WoSCAN), SCAN and NHS Grampian are presented in Figure 1. Usage data at a network level for the North Cancer Alliance was not available at the time of writing this report, therefore, only usage data for NHS Grampian (with proportional modification of predicted use) is included.

Figure 1 Usage data for COVID-19 NCMAG supported treatments

Figure 1

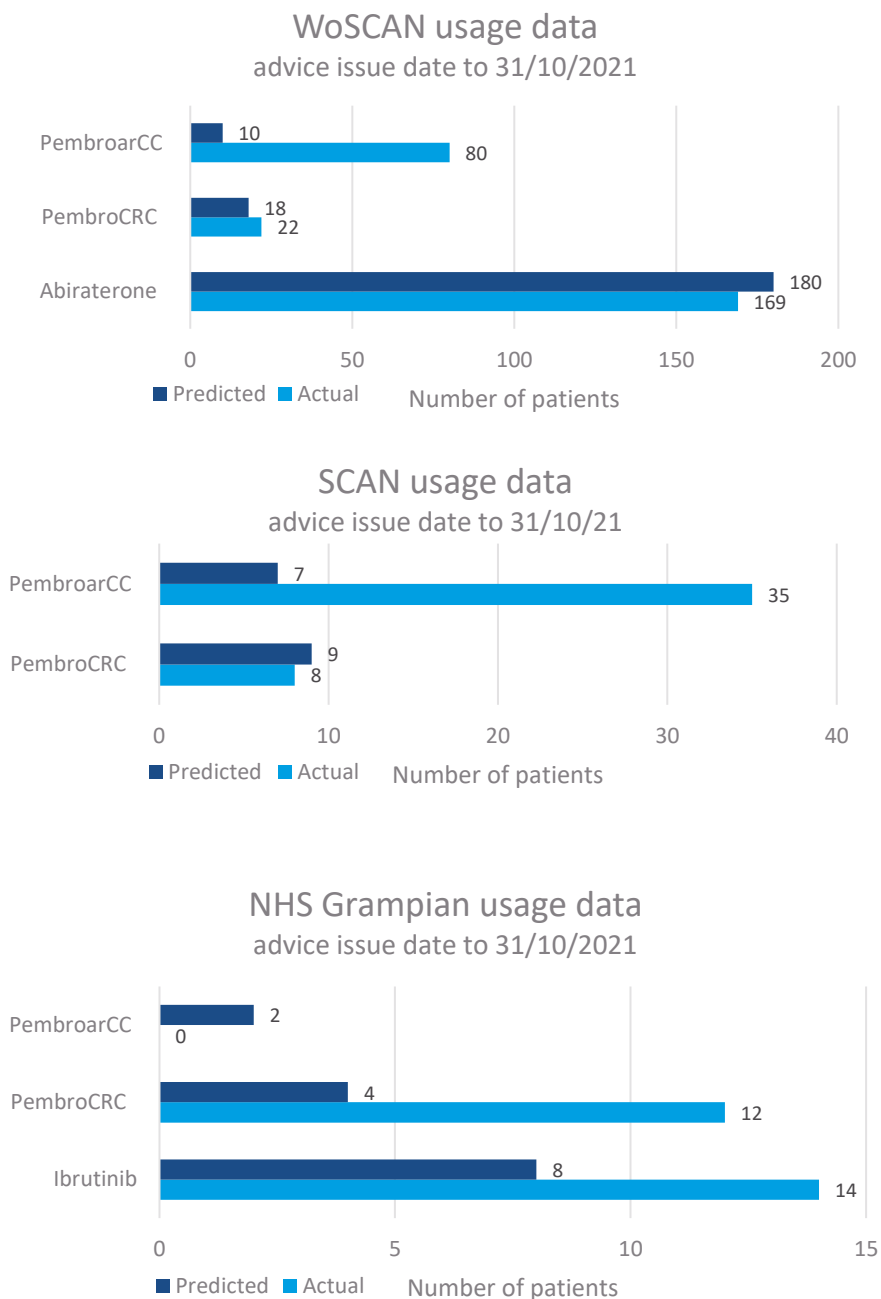


Figure 1 shows that actual use of abiraterone in prostate cancer and pembrolizumab in colorectal cancer were closely aligned to the numbers predicted in the COVID-19 NCMAG submissions. The actual use of axitinib and pembrolizumab in advanced renal cell carcinoma (arCC) appears to have exceeded predicted numbers in both SCAN and WoSCAN. This is explained by the combination of the following factors:

- COVID-19 NCMAG advice was limited to intermediate or poor risk arCC whereas subsequent Scottish Medicines Consortium (SMC) advice also included low risk cancers thus broadening the eligible population.
- Continued desire of clinicians to use COVID-19 NCMAG-approved 6-weekly pembrolizumab for all eligible arCC patients during the pandemic rather than the 3-weekly regimen subsequently approved by the SMC.

Quantitative data for ibrutinib use in both SCAN and WoSCAN, and abiraterone use in SCAN and NHS Grampian, was too time consuming to obtain as this required more than a simple extract of data from Chemocare[®].

Qualitative data on perceptions of impact

To date, qualitative data was obtained from four out of five cancer managers approached, all three of the clinicians approached and four patients.

Clinician Perspective | Impact on patient care

All clinicians reported direct benefits to patients as a consequence of using one of the COVID-19 NCMAG supported treatments including the avoidance of hospital attendance, remote monitoring and prescribing (ibrutinib and abiraterone) and expedited approval of effective therapies.

'The approval of ibrutinib during the pandemic has been excellent for patient care during the pandemic. It is an oral therapy and avoids the need to attend hospital for intravenous infusions required with other treatments for this disease.'

(Clinician 1 delivering ibrutinib, November 2021)

'This drug is at least as effective as the previous best therapy and may have become standard of care over the last 2 years in any case; it is a bonus that it is outpatient based and simple to use.'

(Clinician 1 delivering ibrutinib, November 2021)

A high number of responses from the 2020 user survey commented on the benefits to patients of accessing treatments that reduced the risk of immunosuppression and treatment toxicities and noted that supported treatments assisted in ensuring patient safety and reduced the burden on patients, as per the following two extracts:

'The NCMAG advice has allowed me to continue to safely treat...patients during the COVID pandemic, at a time when we have significant concerns about using otherwise standard immunosuppressive chemo-immunotherapy regimens.'

(Survey, October 2020)

'Prompt approval of treatment changes to reduce patient visits to hospital and reduce need for chair time to allow physical distancing and to help keep cancer patients safe.'

(Survey, October 2020)

Clinician Perspective | Broader impact on cancer services

One clinician who administered ibrutinib believed this treatment reduced the number of attendances for intravenous therapy and hospital admissions for the treatment of complications compared to the alternative conventional cytotoxic therapy.

'Although some patients are admitted with complications of ibrutinib therapy this is far fewer than with conventional cytotoxic therapy.'

(Clinician 1 delivering ibrutinib, November 2021)

Clinician feedback estimated a 50% reduction in hospital visits by changing from three weekly to six weekly pembrolizumab which had the additional benefit of reducing need for limited patient transport. Another clinician acknowledged that, whilst reducing the burden of intravenous therapy for patients, oral therapies had an impact on outpatient clinics and oncologist time with a resultant negative impact on cancer services.

'Although abiraterone was much easier to deliver, the treatment course is continuous, with patients remaining on treatment until progression, which is often 2-3 years, and therefore the number of patients needing review and prescription was significantly higher than if patients had only had the option of chemotherapy.'

(Clinician 2 delivering abiraterone, November 2021)

However, this potential increase in resource use (clinical review and prescription) was placed in the context of overall benefit to patients in terms of reducing the risks related to immunosuppression associated with the standard of care (docetaxel).

'However, although this has provided some extra pressure on clinics, and the formation in many cases of new non-medical prescribing clinics, it is thought very much to be in the best interests of patients.'

(Clinician 2 delivering abiraterone, November 2021)

A broader consequence highlighted in the 2020 user survey was that COVID-19-NCMAG had helped national tumour groups coalesce as a result of the national proposal and review process.

'...we have seen collaborative and engaged clinical leadership emerging organically across Scotland in tumour specific groups as a result of the opportunities that the NCMAG process offered. Some of this leadership was there in most part already but in many cases it has either got stronger or risen from a low base.'

(Survey, October 2020)

Clinicians were given the opportunity to provide any further comments and all comments were very positive and supportive of the timely advice received from COVID-19 NCMAG.

'NCMAG's decisions were readily applicable across the NHS Scotland without having to go through further review processes within each health boards which during the onset and peak of pandemic would have been challenging.'

(Clinician 3 delivering pembrolizumab and axitinib, 2021)

Clinicians were also very supportive of NCMAG continuing as highlighted below.

'We would very much like to continue to use abiraterone in low risk patients beyond COVID, which is the subject of ongoing review by NCMAG.'

(Clinician 2 delivering abiraterone, November 2021)

'The NCMAG advice has generally been very helpful during the pandemic. Going forward there will be a need to consider making some of the measures permanent.'

(Clinician 1 delivering ibrutinib, November 2021)

Patient Perspective | Concerns about COVID-19 infection

Patients reported a perception of high risk towards COVID-19 in hospitals as highlighted in the following extract from a patient who lived in a remote location:

'I live in [remote area] and was concerned about the possibility of having to travel to [mainland cancer service] for treatment during the pandemic. There were limited flights and ferries and I was worried about the risk of exposure to COVID-19.'

(Patient 1 who received ibrutinib, November 2021)

One patient expressed worry over their regular visits to hospital, the time spent in the hospital and concern over complications, which may require treatment in the A&E department.

'The risk of sepsis [.....] worried me as I was concerned about being treated in the A&E department at the time'

(Patient 3 who received encorafenib/cetuximab, November 2021)

'Attending hospital was already nerve wracking having been diagnosed with bowel cancer but to have to undergo days in hospital on chemo with no visitors was hard – I was nervous about contacting COVID-19 as well.'

(Patient 4 who received pembrolizumab, January 2022)

Another patient expressed that their main concern was a lack of knowledge around COVID-19 and how the time spent in a ward environment would pose risk to them.

'I could potentially be exposing myself to many different social contacts by virtue of simply being present in a ward, therefore theoretically putting me at more risk of catching the virus than had I stayed at home.'

(Patient 2 who received pembrolizumab and axitinib, November 2021)

Patient Perspective | Experiences of being treated with a COVID-19 NCMAG supported treatment

The patient believed that the benefits from receiving one of the supported treatments included reducing the need to travel and attend appointments in hospital. This is highlighted by the following extract:

'I did not have to travel to [cancer service] at all because I could have all of the blood tests and other monitoring performed locally in [remote area].'

(Patient 1 who received ibrutinib, November 2021)

The benefit of reduced hospital attendances were also echoed by the other two patients, who received less intensive treatment schedules (pembrolizumab/ axitinib and encorafenib/cetuximab) than previous standard of care.

'I only needed to attend once a fortnight for intravenous cetuximab [.....]. The rest of my treatment were to take daily encorafenib tablets at home.'

(Patient 3 who received encorafenib/cetuximab, November 2021)

One patient highlighted the emotional relief that a less intensive regimen provided.

'That's when Dr. [.....] put me on the pembrolizumab...that was much easier – an hour or so every six weeks – mentally much easier'

(Patient 4 who recieved pembrolizumub, January 2022)

Cancer Manager Perspective | General perception

All of the managers agreed that COVID-19 NCMAG advice contributed to a reduction in the number of hospital visits for treatment, monitoring and management of adverse events and

that this contributed to their health board's ability to deliver Systemic Anticancer Therapy (SACT) to oncology and haemato-oncology patients throughout the pandemic despite patient 'shielding', 'lockdown' and social distancing restrictions, as demonstrated by the comment below:

'The use ibrutinib in chronic lymphocytic leukaemia and lenalidomide in myeloma in particular, provided us with valuable alternative treatment options and had a significant impact on reducing patient footfall within clinics and day units.'

(Cancer Manager 1, November 2021)

Cancer managers' views varied in how much they felt that COVID-19 NCMAG advice contributed to reducing chair time and local service resource use and a few managers expressed that this was just one contributing factor amongst an array of measures being used to overcome the challenges COVID-19 poses to cancer services, as demonstrated by the comment below.

'NCMAG advice was a relatively small but important contributor to the above as part of a much wider range of measures. This is borne out by the differences in SACT service continuity rates across Scotland, even though all services were in receipt of the same advice.'

(Cancer Manager 2, November 2021)

It was also made clear that these challenges remain present at the time of collecting this feedback:

'SACT services continue to be challenged by COVID and activity has now risen significantly over the last 12 months. Although these measures provided some respite for day units and pharmacy aseptic units when introduced, we are experiencing a steep rise in activity now as a result of the increasing number of patient treatment episodes and patients moving to more service intense lines of treatment.'

(Cancer Manager 1, November 2021)

Cancer Manager Perspective | Utility of budget impact tool

A respondent from the previous survey, October 2020 expressed the challenges of managing the financial implications of COVID-19 NCMAG advice prior to the introduction of the budget impact tool, as below:

'Difficult to keep a handle on the financial/ budget impact of the changes but this was probably due to the speed at which many of the changes were implemented.'

(Survey, October 2020)

A budget impact analysis tool was shared with health boards to support implementation of COVID-19 NCMAG supported advice. The recent feedback obtained from the cancer managers was all very supportive of the budget impact tool as detailed in the following three extracts:

'The budget impact tool was useful as an initial way of projecting financial impact of NCMAG advice. This provided some useful guidance on drug spend estimates. Pharmacy linking in with the Finance Department throughout the year was a key factor to allow tracking and adjustment of estimated drug spend.'

(Cancer Manager 1, November 2021)

'The budget impact tool was useful and helped us identify costs associated with treatment changes, a number were more expensive than standard treatment.'

(Cancer Manager 2, November 2021)

'Recommended changes were adopted by clinicians before cost was considered as it allowed patients most in need of SACT treatment to receive it and reduce potential for adverse events (particularly neutropenic sepsis).'

(Cancer Manager 3, November 2021)

It is anticipated that budget impact analysis will continue to be provided to health boards as part of business as usual NCMAG.

Single site audit of impact of granulocyte colony-stimulating factor (GCSF) use

Eighty-six patients with lung cancer in at a single centre received SACT regimens supported by primary GCSF in the 2020 audit period. The rate of admission to hospital for treatment related infection (neutropenic sepsis) during this period in 2020 was 8% (7/86 patients) compared to an admission rate of 24% (45/185 patients) in a similar audit done in 2019. This significant reduction in admissions to hospital for treatment related sepsis is at least partly attributed to the more permissive use of GCSF in these treatments during the pandemic, supported by COVID-19 NCMAG002 advice.

Summary of findings

Analysis of treatments supported by COVID-19 NCMAG advice in three common tumour types has shown actual usage to be aligned to predicted usage in the regional networks and health boards that were able to provide data within the timeframes requested. Due to a number of limitations, primarily the high level of staff resource that would be required, usage data for the full suite of COVID-19 NCMAG supported medicines were not obtained. Due to the way treatment regimens are set up within Chemocare®, it was not possible to identify and extract data specific to all the COVID-19 NCMAG supported medicines and treatment indications from the Chemocare® system. Doctors across the three regional cancer networks confirmed their satisfaction with the additional treatment options available to them as a result of COVID-19 NCMAG advice to try to minimise risk for their patients whilst optimising patient outcomes.

Patients expressed anxiety about attending central hospitals for treatment due to concerns about COVID-19. Treatments that could be delivered less frequently or with less risk of side effects were viewed favourably by the patient.

Cancer managers across Scotland felt that COVID-19 NCMAG advice played a part in a multifaceted approach that contributed to the continuity of oncology and haemato-oncology SACT services throughout the pandemic.

These findings provide some evidence that COVID-19 NCMAG advice has been relevant, useful and impactful and that this has applied to cancer services across Scotland.