

The Cancer Maps

Introduction

The [Cancer Maps](#) are a unique, cancer decision support tool for primary care. They clearly summarise the 2015 NICE NG12 Cancer Guidelines in three mind maps. The maps are interactive and guidance is presented immediately, allowing use during consultations to help inform health professionals around further history taking, examinations to do, investigations to order or referral pathways to follow.

The information within the [Cancer Maps](#) has been closely scrutinised, it is the only cancer decision support tool to be [endorsed by NICE](#) and the RCGP. The story of their development has been made public via a number of [news articles](#) and TV interviews. Since 2021, it has been recommended in the national [Primary Care Network cancer enhanced service](#) (page 6). Clinicians are signposted to the Cancer Maps on referral systems throughout the East Midlands, Manchester and London.

The tool is the most visited page on the Health Education England-sponsored [Gateway C](#) cancer education website, regularly achieving 3000-4000 hits from health professionals each month.

In 2021, the maps were updated to include more visual appeal and a wealth of extra information, via a series of pop-ups on the relevant branches, as well as links to Gateway C's educational modules. The maps are now widely used not only in clinical practice but in education, providing a particularly useful visual aid for case studies.

What are the main applications for the Cancer Maps?

1. To use the search function in a clinical setting

This function allows practitioners to search for the signs and symptoms which appear in the guidance and can be used during consultations without disrupting the flow of that consultation. Some patients have a number of complex symptoms and clinicians can check which organs should be considered with those symptoms, according to NICE. More simply,

a clinician might want to check if a certain symptom might be a red flag for the patient they have in front of them, eg. is bloating a relevant symptom for men in any cancer?

2. Quick reference to NICE guidance

For example, checking at what age a change in bowel habit warrants a 2ww referral to colorectal – this is easily done in a matter of seconds with the maps.

3. To share with a patient, eg. for safety-netting/reassurance

The maps can be shared with patients who are openly worried that their symptoms might be cancer-related. For example, a patient whose father has passed away with pancreatic cancer might be understandably worried that some of their symptoms might also be related. The maps can be a powerful visual reassurance in these circumstances, they clearly show the symptoms clinicians look out for with respect to each cancer. By the same token, they can be a useful resource for showing patients which symptoms they should look for in future, thereby helping with safety-netting.

4. As an educational aid

The maps have been used widely in education and continue to receive positive feedback from clinicians throughout primary care, including GPs, advanced nurse practitioners, physicians associates, physiotherapists, junior doctors and medical students. They can be used as an aid during tutorials/webinars and by students when revising for exams. They can and have often been used with colleagues, eg. when discussing complex cases or during GP multi-disciplinary team meetings.

5. As an aid for audit

The PCN cancer DES specifies that clinicians audit their patients diagnosed with cancer against NICE guidance in order to ensure and promote best practice. The Cancer Maps provide a simple method for informing users whether NG12 guidance was followed for their cancer diagnoses. This can then inform quality improvement and earlier diagnoses in future.

How can users get the most out of the maps?

If users haven't done so previously, they should familiarise themselves by viewing the tutorial (just click on the tutorial button in the upper right information panel).

Most current users have the tool open (alongside any other clinical tools, email, etc) on a 2nd monitor and the patient notes on their 1st monitor.

What are the main benefits of the Cancer Maps over other CDSTs

Primary care clinicians are challenged most by patients who have multiple symptoms. With the Cancer Maps, they have fast access to the NICE NG12 criteria during the consultation.

Clinicians don't want pop-ups or intrusive tools that interfere with their clinical judgement, hence CDSTs don't necessarily need to be embedded into clinical systems like EMIS or System1. The drawback of many CDSTs that work within clinical systems is that they require users to code the symptoms of their patients, whereas the majority free-text still.

An area which represents a knowledge gap for the majority of clinicians is the reliability of the investigations they're requesting. There's a huge variation in access to investigations for primary care across the country, some investigations being more reliable than others, eg CT vs chest xray for lung cancer. Hence the unique function of the maps in advising the user about the false negative rate of the test they may go on to request. It does this at the time they're thinking about the investigation, not after they have the result when users are less likely to consult a CDST.

A recent pilot provided evidence of the positive impact of the maps on working GPs, both locally in the East Midlands and around the country.

Cancer Map Pilot – Summary of Results



How can this tool be developed, are there wider uses?

- There is potential to create bespoke maps, depending on local, specialist guidance. It is also possible to link the tool to local software systems and upload relevant referral forms to them. Bespoke maps can also be created for clinicians abroad, according to the guidance their country has in place.
- Patient information leaflets can be created and attached to aid safety netting and support patients with their 2ww referral.
- Metrics could be collected from the maps to inform further development initiative.
- This form of clinical decision support has potential in other clinical areas, eg diabetes, asthma/COPD. It could also be used to support decision making in secondary care.
- Education tools can be created from the maps, displaying relevant case studies according to the audience. This is particularly relevant at a time when the primary care MDT is growing ever more diverse.
- This tool can be adapted to help those with no medical training to decide if they might be at risk of cancer. I have already developed a prototype for public use, which would benefit from further development technical support. I would envisage a wellness app,

concentrating on lifestyle changes to reduce the chances of having cancer, displaying the information within this prototype (please see [Patient Maps V0.81 \(d14211ex7p907m.cloudfront.net\)](#) and click on the “How do they Work” cloud.

Feedback received for the Cancer Maps

The following represents a small proportion of the feedback I have received from clinicians throughout primary care and across the country.

I have just been introduced to your Cancer MindMaps work and I want to say thank you; I think this is an amazingly helpful tool and I appreciate the time and effort you put in to make it work. Once again thank you.

Can I thank you for this tool .

So very useful to both focus the mind and at the same time prevent being blinkered . (hope that makes sense)

I am a GPST2 who has been shown your Cancer Maps site and just wanted to say how wonderful it is. Thank you very much for creating it.

Just dropping a line to say how interesting and relevant the Webinar was. I had to miss the last 20mins for a meeting but will catch up on GatewayC

Showing your tool was excellent and will load it during my surgery to try it out.

I have just watched your tutorial. The map is excellent, what a useful clinical tool and user friendly.

Brilliant! I will certainly be adding this to my tool kit.

I have just come across your mind maps, they are simply brilliant! Thank you so much.

I just was stuck with this 30 year old man with dyspepsia and dysphagia when previous senior GPs have started him on PPI.

However, I wasn't comfortable with giving him PPI. Hence turned to your NICE map and now referring him for 2week direct access OGD.

And there are many cases especially atypical ones when I use this map.

I am a GP registrar working in south London. On daily basis I see patients presenting with concerns for cancers and I have found this too so much useful for myself and for my patients and thank you so much for that.

I was a GP for 27 years, now my research interest is early diagnosis of cancer in primary care. I think your Cancer MindMaps are superb. Well done!

Feedback from one webinar, run by Spire, 17th Feb 2022:

What did you specifically gain from today's event?

Gateway C Cancer Maps

2ww criteria and good resources

I learned that even if tests such as CXR and FIT test come back negative one should still monitor patients or consider referral in view of risk of false negatives.

I thought this talk was excellent. It far exceeded my expectations. It was extremely helpful. I thought Dr Noble and Dr [unclear] could follow and understand. Often you find speakers rush through things or focus on irrelevant things which I did not find delivered by Spire educational events. Also would like to say Jenny is an excellent host and always so lovely when communicating with you.

Cancer maps was a hugely useful tool

1) how to use gateway c Cancer Maps to help with diagnosis

2) new updates on system 1

Cancer maps

I was made aware of Gateway C Cancer maps and healthtalk.org

Increased IT knowledge in addition to clinical information

Cancer Maps, very useful tool, will definitely use in daily practice, thanks

Unexplained symptoms and cancers to suspect, came to know about The cancer maps, Cancer safety netting templates and tests

Advice to use Gateway C and cancer maps. Advice on how to improve safety netting within the surgery by having a red flag

Useful signposting to resources

The process of cancer maps

Cancer maps

Lots of info on cancer safety netting and referral pathways and websites for signposting.

Cancer pathways, gateway and new templates

about safety netting cancer referrals; the roadmap for various cancer pathways;

Safety netting advice

Website link for patients to access to learn about their condition