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Greater Manchester is a thriving global region and in 2018 was once again named the best UK city to live in, claiming the top spot in the Economist’s ‘Global Liveability’ UK index, rising fast up the international rankings. Part of this ranking takes into account healthcare; it is certainly an exciting place to be in cancer care as we witness many developments and plans being put into place, and as we see our outcomes for patients, and investment in healthcare research and innovation improving year-on-year.

The recent success of cancer care in Greater Manchester (GM) over the last 5 years comes down to a number of key factors: We have a comprehensive connected integrated cancer system led by clinicians and patients driving real change and providing leadership not just in Greater Manchester but across England and the UK. Through the devolved health and social care system we have a supportive ecosystem facilitating links across the region, and we have centres of excellence such as The Christie, The University of Manchester, The Manchester Cancer Research Centre, Salford Royal and Manchester University Foundation Trusts bringing cutting edge research, technologies and innovation to our population.

2018 also saw a large number of new initiatives launched. Amongst these we now have a single surgical site for stomach and oesophageal cancers, the largest in Europe which should create the conditions to generate world class care. We have also launched a GM blood and lymphatic cancer diagnostic service, something which has been in the making for 15 years that has now come to fruition. We have opened the NHS England’s first Proton Beam Centre and launched a GM genomics cancer service which will help us navigate through the fast changing and developing world of personalised treatments.

We hope you enjoy reading about the progress in cancer care across Greater Manchester in 2018 and can sense the enormous energy for cancer improvement that our clinicians, patients and managers are generating.

In 2018 we have seen patients living longer with cancer than ever before, with our cancer survival rates which continue to improve faster than the rest of the country. Our patients have given us a score of 8.8 out of 10 in terms of overall patient satisfaction with care. We are diagnosing patients with disease earlier than others across England and our smoking rates are rapidly declining.

Of course we have faced increased challenges this year. The most visible has been the huge growth we are seeing in patients being referred for tests with suspected cancer, a 7% year-on-year increase. This is a good news story as we want more patients to be assessed so that we can detect more cancer cases earlier. However our diagnostic services have not kept pace and we will redouble our efforts to get patients diagnosed as soon as possible. Certainly we have launched many initiatives in late 2018 that should help manage and improve the time to treatment from referral for patients in the years to come.

We feel passionate about involving patients and carers in our service and this has given us great benefits. With the help of Macmillan Cancer Support we have developed a system over the last 5 years that works, where service users are involved in the design of any new service or pilot project that we introduce. Nowhere was this more obvious than at our inaugural Greater Manchester Cancer conference this year where patients and carers were central, making it a huge success.

We hope you enjoy reading about the progress in cancer care across Greater Manchester in 2018 and can sense the enormous energy for cancer improvement that our clinicians, patients and managers are generating.

Professor David Shackley
Medical Director of Greater Manchester Cancer

Dr Richard Preece
Chair of the Greater Manchester Cancer Board
1 in 2 people in Greater Manchester will get cancer in their lifetime.

**INFOGRAPHIC**

**IN 1980**

The typical cancer patient survived 1 year after receiving their diagnosis.

**NOW IN 2018**

This is over 10 years in Greater Manchester.

**53%** Ahead of England on early diagnosis:

53% of patients are diagnosed with early stage disease, rising from 48% in last 4 years.

**Paired with:**

90% of people live more than a year after diagnosis with early stage disease versus 50% with late stage disease.

**28%** 28% of people in Greater Manchester die from cancer, the commonest cause of death.

**£650M** Greater Manchester will spend over £10M new funding obtained in 2018 to deliver high priority cancer programmes.

**IT IS ESTIMATED THAT**

Greater Manchester will spend over £650M per year on cancer care by 2021.

**FIRST CANCER ALLIANCE IN ENGLAND TO HAVE:**

1st A comprehensive cancer plan for the population

Patients and carers embedded at every level

A Cancer Conference for the whole system

**£10M**
INTRODUCTION

Momentum continued to build in Greater Manchester Cancer in the last year as the cancer programme became more visible and expansive. Two significant events signalled this, firstly the GM Cancer Conference and secondly the award of £10 million funding for priority projects from the transformation fund of the Greater Manchester Health and Social Care Partnership. Arguably though the most important indication of this building momentum was the opening and first treatment of a patient in the £120 million Proton Beam Centre at The Christie in December 2018, the first such NHS centre in the UK.

CONFERENCE

In November 2018, the Greater Manchester Cancer system came together in our inaugural Cancer Conference at the Emirates Old Trafford Conference Centre. Five hundred and fifty delegates and speakers, including 50 patients and carers met to share stories and learning, to reflect on and refine future plans. The feedback was very positive with a 94% ‘would recommend to friends’ figure and as such it is likely another event will be planned, perhaps 2 days, in December 2019. More on this can be found in the EDUCATION section.

£10 MILLION INVESTMENT IN PRIORITY PROJECTS

In late 2018, details were finalised on the award of £10 million funding (2018-21) to Greater Manchester Cancer to deliver a series of transformation projects. More detail on each can be found within this report. The projects include:

• Supporting faster diagnosis in lung, colorectal and prostate cancer using one stop clinics, the latest scanning techniques and straight to test approaches.
• Delivering an innovative rehabilitation and exercise programme to 2000 patients receiving cancer treatment.
• The CURE programme delivered in hospitals and the community to reduce tobacco use, saving up to 3000 lives per year by 2021.
• New ways of personalised follow up in breast cancer.
• Introducing a shared decision making tool in advanced cancer to further empower patients to make the right personal choice (CAN-guide).
• Developing an intelligence service for cancer which in time will lead to real time outcomes for professionals and patients.
• Offering increased training and learning opportunities for professionals to improve the delivery of cancer care.

PROTON BEAM CENTRE

In December 2018, the Christie became the first of two NHS Proton Therapy services to deliver this advanced form of radiotherapy to patients. University College London Hospital will start to treat patients in 2020. This means that patients no longer have to travel to the USA or mainland Europe for up to eight weeks to receive their treatment, and those patients too sick to travel overseas will now be able to access the therapy previously unavailable to them.

Proton Therapy is advantageous for treating tumours where conventional X-ray radiotherapy (photons) would damage surrounding healthy tissue within patients to an unacceptable level. This is particularly beneficial for patients whose cancers are close to the spinal cord, brain, eye or inner ear. The greatest potential benefit of Proton Therapy is for children, teenagers and young adults where the long term side effects of radiotherapy are of great concern; Proton Therapy allows an effective dose to be delivered to the tumour whilst sparing healthy tissue and reducing the likelihood of long term side effects.

The service has dedicated facilities for both children and adults and has close clinical links with Royal Manchester Children’s Hospital and Salford Royal Foundation Trust for their paediatric and neuro-oncology expertise respectively.
PREVENTION & SCREENING

Cancer prevention and trying to detect cancer early are core priorities for our cancer system. We continue to develop our 'Cancer Champions' programme and we now have over 6000 local cancer volunteers who have signed up to spread key cancer messages around prevention and screening in their neighbourhoods.

In 2019 Greater Manchester will launch a specific engagement programme within communities, alongside voluntary and other local groups, to raise awareness and uptake of the 3 main cancer screening programmes (Breast, bowel and cervical). It will specifically target those who are least likely to access cancer screening.

In 2014 Cancer champion Gilbert Morgan was given the all-clear from prostate cancer, he said: “It’s easy to get involved in becoming a cancer champion and it’s very rewarding to be able to help people look after themselves.”

PREVENTION

Sixteen thousand people are told every year in Greater Manchester they have a potentially life threatening cancer and of those, it is estimated by Cancer Research UK and others that 6,000 people could have avoided the diagnosis with earlier lifestyle changes. In GM we have been developing programmes in place for increasing physical activity, reducing tobacco use and alcohol intake. We know these programmes will reduce the number of patients getting cancer in future.

SMOKING

Smoking remains the largest single cause of cancer in Greater Manchester, being a major factor in over half of the preventable cases. In addition to causing a fifth of all cancers, it also contributes hugely to ill health and to local people dying earlier from a range of illnesses, often 7-10 years earlier than they otherwise would.

Nationally, a challenge has also been set to reduce smoking rates in pregnancy to less than 6% by 2022. In GM, we have committed to reducing smoking at delivery from its current rate of 12% to meet 6% everywhere by 2021. Our aspiration is that all babies will ultimately be born in a ‘smokefree’ environment, as part of our vision to deliver a tobacco free generation within a decade. Recent data from GM shows that we are making faster progress in this measure than most other areas in England.

The GM plan also includes a Greater Manchester Stop Smoking Hotline launched in 2018 which gives residents a number to call, 0300 123 1044, seven days a week to get advice. Further details on this broad and transformative programme can be found by searching for ‘Making Smoking History’.

GM aims to be the first city region in Europe to make smoking history, an aim that is supported by 4 out of 5 residents, including half of those that smoke.

Greater Manchester has a hugely ambitious plan to reduce smoking rates in adults to 13% by 2021, from the 20% it was in 2015, through a range of initiatives. This plan, more ambitious than any other major city region in the world, is on target according to the latest figures.

Kevin Alliston - Previous heavy smoker now diagnosed with cancer.

I’ve got a wife and two babies, and finding out that I may not be around for them is incredibly tough. We just need to keep things as normal as possible for them, but it’ll be harder as things progress.

Kevin Alliston, Patient
CURER Greater Manchester is leading the way with a flagship programme to tackle tobacco addiction called CURE. This was launched in late 2018 at Wythenshawe Hospital on the first day of ‘Stoptober’ – a nationwide stop-smoking challenge which encourages smokers to quit. CURE forms part of the GM tobacco control strategy.

For the first time anywhere in the UK, all smokers admitted to hospital in Greater Manchester will be offered intensive support and medication to help them kick their tobacco addiction. After a six month pilot the scheme will start to be rolled out in other hospitals across Greater Manchester over the next 2 years.

Over £2.5 million funding has been agreed to deliver this from a variety of partners, the majority from the GM Health and Social Care Partnership with contributions from other organisations including Wythenshawe Hospital and Pfizer.

“...A stay in hospital is often a time where people focus on their health. There is no greater step they can take than stopping smoking. But nicotine is highly addictive and support and medication are needed. CURE provides that.”

Matt Evison
CURE Project
Clinical Lead

The work builds on a highly effective evidence-based Canadian programme from Ottawa where huge benefits were noted for patients and the health system through targeting smoking cessation in hospital patients rather than the typical approach of more general measures in a public health setting.

At present patients admitted to hospital are rarely offered help, support or treatment to help them stop smoking. The project involves all admitted patients who smoke being identified and offered medications for typically 8-12 weeks along with support from a trained professional in the hospital and in the community on discharge. Smokers are 4 times more likely to quit if they receive medication and support than if they only rely on their own initiative.

Based on the Ottawa results, the programme is expected to support 50,000 people successfully quitting smoking in GM by 2020, saving an estimated 3000 lives every year. The project will also free up thousands of hospital beds saving the NHS in Greater Manchester an estimated £10 million per year in 2020 and beyond.

Already just over 3 months into the pilot phase, over 50% of smokers have accepted nicotine replacement treatment and help, with a quarter of admitted smokers overall quitting smoking. The CURE work, and Greater Manchester’s leadership in this area, has been cited in the new 10 year NHS Long Term Plan.
ACTIVITY AND EXERCISE

We know that the chances of getting cancer can be reduced by being more active. 38% of people living in GM are not doing enough activity to benefit their health. This figure is worse for certain groups such as females, people with disabilities, people with low incomes and black and minority ethnic populations.

The latest evidence also shows that being active can help you have better outcomes with cancer treatment in addition to helping mental wellbeing at a time of great stress.

‘Greater Manchester Moving’ is the comprehensive plan to reduce inactivity and increase participation in physical activity and sport across our region. This plan has gained substantial momentum in 2018 with an ambition to reach a target of 75% of Greater Manchester residents being active by 2025.

SKIN CANCER

Over 1,200 people in Greater Manchester get the most serious type of skin cancer, melanoma, every year. Unlike many other cancers which are associated with lack of exercise, smoking and obesity, skin cancer has different risk factors such as skin exposure and sun bed use. Melanoma is growing in incidence in GM at 12% per year. Preliminary work completed in 2018 will lead to a GM-wide strategy to be adopted in 2019.

ALCOHOL

Alcohol is a significant cause of harm in Greater Manchester. Figures from the Office of National Statistics show that around 400 people per year in GM die from drinking too much alcohol, with 22,000 hospital admissions per year directly caused by alcohol. We know that alcohol causes at least 7 types of cancer including breast, liver, mouth and bowel cancers and that over 1000 people are diagnosed with an alcohol-related cancer each year in Greater Manchester.

Particular highlights from 2018 include

- Securing £10 million of Sport England investment in our conurbation to develop and test approaches to improve physical activity participation including targeted work in cancer.
- GM was announced as the world’s first city region committed to The Daily Mile by encouraging all its residents to get moving and adopt 15 minutes of physical activity every day.
- £2 million GM Health and Social Care Partnership investment to create a social movement aimed at establishing GM as a ‘walking city-region’.
- £1 million Sport England funding for ‘active ageing’.
- Reciprocal gym membership scheme across the city-region.
- ‘Beelines’ launched by our cycling and walking commissioner, a new integrated cycling and walking network across our city.
- £160 million for the Greater Manchester’s Cycling and Walking Commissioner’s “Made to Move” cycling and walking plan which takes the spending per head on active travel from around £5 to £15, a level more comparable to leading global ‘active’ cities such as Copenhagen.

In late 2018 we launched the Greater Manchester ‘Big Alcohol Conversation’ to engage local people in a discussion about the ways we could jointly tackle the harm caused by alcohol, and the first ever GM Drug and Alcohol strategy is due to be published in spring 2019.

HPV VACCINE EXPANSION

All girls and young women in GM are offered the HPV vaccination which should prevent the majority of cervical cancer cases in future years with the benefits of this policy becoming obvious from 2025 onwards. In 2018 a national agreement means that from 2019, boys aged 12 to 13 years old in GM should start being offered this vaccine too and thus help reduce throat, anal and penile cancers in the future. Our GM Cancer Head and Neck & Gynaecology Pathway Boards are supporting the GM Screening and Immunisation Team on the roll-out of this school-based vaccination programme.
SCREENING

By detecting cancer at an earlier stage we are much more likely to cure the disease, offer less toxic treatments and make it more likely that patients can return, in time, to their normal life.

Many experts agree that the main reason England has poorer outcomes for cancer than neighbouring European countries is largely down to people in the UK presenting later, and with more advanced disease, to their doctors than in mainland Europe. Detecting disease earlier, and if possible by screening when there are no symptoms, are key levers for us to improve cancer survival.

Modelling and planning has taken place in the second half of 2018 to enable the introduction of a more accurate and more convenient way of testing for bowel cancer called ‘FIT testing’. This should be available to all patients being screened from 2019 and this is likely to increase the numbers of people undergoing screening by up to 10%, and reduce the numbers of patients having unnecessary bowel telescope tests.

In cervical cancer screening primary HPV testing is being rolled out across Greater Manchester with 70% of women having access to this in December 2018. This should be 100% by summer 2019. The advantage is that the result of the screening test is available more quickly, reducing anxiety, and in addition it is more accurate at detecting early changes than conventional techniques.

The unique additional ‘GM spin’ was to offer the scans at a neighbourhood level in local supermarket car parks rather than expect people to travel to large hospitals for assessments. Patients much preferred this. From this work, and reviewing the data in great detail, a GM model was developed for how lung cancer screening should be undertaken.

LUNG HEALTH CHECKS

Last year in our report we updated you on our unique approach in Greater Manchester where 2,500 people from inner city areas received a free lung health check and chest scan in supermarket car parks after a targeted invite this was led by Macmillan and Manchester Clinical commissioning group (CCG).

Smokers and ex-smokers are at particularly high risk of lung cancer and chronic breathing difficulties and they were offered the chance to benefit from a ‘lung MOT’ and a scan to see if they had early lung cancer. They were also offered health advice and support. The results have drawn international interest in 2018 which has contributed to the increasing evidence to support targeted lung cancer screening. Rather than diagnosing lung cancer when the disease had spread (usually seen in 80% of patients), the screening led to patients being detected with curable disease in 80%. Lung cancer was seen in every 33 scans.

The unique additional ‘GM spin’ was to offer the scans at a neighbourhood level in local supermarket car parks rather than expect people to travel to large hospitals for assessments. Patients much preferred this. From this work, and reviewing the data in great detail, a GM model was developed for how lung cancer screening should be undertaken.

On the back of this, and other international work, in 2018 NHS England recommended that lung health checks be extended to selected populations across England with national funding being offered commencing 2019.

Greater Manchester has agreed over the last year to run Lung Health Checks to a broader population including North Manchester and Salford from 2019 with plans to widen further over time.
Clinicians and researchers from Greater Manchester have led a national initiative to develop new targeted breast screening for women who have previously had radiotherapy to the chest.

This often happens for cancers such a lymphoma where women have radiotherapy at a young age and as a consequence have a five-fold increased chance of developing breast cancer later in life. Clearly it would be advantageous to give these women additional targeted screening because of their particular risk profile.

A single national database of such patients has been created and working with Public Health England, a national screening programme has now been set up which will ‘go live’ in summer 2019.

This is a world first and genuinely led by local clinicians. Anne Mackie, the National Screening Director described BARD, at the national launch meeting in Manchester in late 2018, as ‘the model for cancer surveillance in high risk populations’.

 Cutting edge research from Greater Manchester led by Professor Gareth Evans and team has shown it is possible to identify women at higher risk of breast cancer. 58,000 women were recruited into a Manchester led trial (PROCAS) which demonstrated that breast density on mammography, basic clinical information and genetic factors (single nucleotide polymorphisms -SNP’s) can be used to identify women more likely to get breast cancer.

This work has continued to be developed and currently the programme is evaluating whether the use of this information can reliably mean women at higher risk would benefit from more frequent screening than the current 3 year window. This would have national and international implications and change generic breast screening into a personalised screening model, created around the individual risks of each woman.

A new finding in 2018 was that more aggressive tumours are more likely to be found in women with more risk factors. This work puts Greater Manchester right at the front of personalising screening approaches in cancer.

Clinicians from Greater Manchester have led work, alongside NHS England and other partners in London, to develop the best evidence-based way of diagnosing 3 types of cancer most effectively. The 3 types chosen were common cancers where diagnostic problems and variation was most marked across the country. These accelerated pathways have been nationally endorsed and were published by NHS England in April 2018. By 2021, all hospitals are expected to adopt these pathways. For patients, they mean fewer hospital visits for tests, with cancer diagnoses achieved typically 10 days earlier.

The latest research published in the Lancet medical journal shows that the use of the latest MRI scanners in men suspected of having prostate cancer can reduce by a quarter the numbers of men having unnecessary prostate biopsies.

Mr Satish Maddineni, the GM Cancer Urology Pathway Director, co-led a national vanguard working group to develop a refined prostate diagnosis pathway. After final national refinements, this straight-to-test MRI pathway is now being implemented across GM.

This will lead to men in Greater Manchester getting a more accurate diagnosis, and where we can avoid hundreds of potentially painful prostate biopsies every year with the attendant risks of infection. In the near future, the MRI scan opens up the option of accurate targeting of any biopsies that are needed with new safer forms of biopsy technique.
LUNG CANCER ACCELERATED PATHWAY

A £1.3 million Transformation Fund investment was secured in autumn 2018 enabling a full roll-out of the lung best-timed pathway across all 4 GM sectors in 2019.

The Greater Manchester lung cancer pathway will exceed the national guidance set out in 2017 to substantially cut cancer waiting time by ensuring rapid access to CT imaging when a suspicion of lung cancer is raised, hot reporting and same day triage of results. The GM ambition is treatment by day 28 after GP referral where the national pathway works towards day 49.

Cross organisational working and protocolised diagnostic bundles will be utilised to deliver complex diagnostic and staging pathways through high volume diagnostic hubs. Pathway Navigators are pivotal to co-ordinate and streamline the pathway utilising multiple tests on a single visit or as few visits as possible. Streamlined and efficient treatment pathways utilising regional and treatment-specific triage processes ensure rapid progression to treatment following confirmation of diagnosis, stage and treatment plan. The model is based on Wythenshawe Hospital’s RAPID Programme which won a prestigious HSJ Award in November 2018.

NON SPECIFIC BUT CONCERNING SYMPTOMS
MULTI-DISCIPLINARY DIAGNOSTIC CENTRES

Greater Manchester was selected as 1 of 5 sites to test and develop a new way of assessing patients referred with non-specific but concerning symptoms, where cancer is a possibility. These patients have no specific symptoms to help direct a referral to a particular specialist and as a consequence, their diagnosis is often delayed with multiple unnecessary tests.

In 2018 the results of the project have been presented which show huge promise:

2 sites tested the model in GM with the data showing up to 12% incidence of cancer in these patients, with an average time from referral to diagnosis of only 11 days.

In parallel with this project, doctors from Manchester have worked with the National Cancer Team to agree a national protocol to follow in such patients, with this work likely to be published in 2019.

COLORECTAL ‘STRAIGHT-TO-TEST’ ACCELERATED PATHWAY

22,000 people in 2017/18 were referred in GM with suspected bowel cancer, representing a 10-15% year-on-year growth in referrals. A more efficient pathway can help streamline the patient experience and help manage this growth.

Starting in late 2018 with completion by March 2021, the colorectal accelerated pathway is being implemented and involves patients attending straight for a bowel scope test after referral paired with biopsy and a fast-track CT scan. All tests are typically completed on 2 visits within a maximum of 3 weeks of referral. This streamlining avoids excessive appointments to the hospital and cuts down the time to treatment by an estimated 10 days.

IMPROVED AND STANDARDISED CARE

PREHAB4CANCER & RECOVERY PROGRAMME

The importance of ‘prehabilitation’ or preparing patients for treatment, alongside active recovery pathways are being increasingly recognised as beneficial by cancer patients and healthcare providers around the world.

The elements of physical activity, optimising diet and psychological support appear pivotal to improving patients’ outcomes and quality of life.

GM Cancer will be the first regional system in the UK to introduce large scale prehabilitation as a standard of care for cancer patients, starting in 2019.
Through transformation investment we will support more than 1,000 patients per year undergoing cancer interventions (major surgery, chemotherapy and radiotherapy) through freely accessible preparation and recovery physical activity, nutritional and well-being packages across GM over the next 2 years. This programme builds on existing enhanced recovery after surgery (ERAS®) pathways available in most hospitals in the region.

To deliver this system change, GM Cancer is working in partnership with local healthcare providers, community GM Active leisure providers, Macmillan Cancer Support (in tandem with the delivery of the recovery package to people affected by cancer), Health Innovation Manchester and the Manchester Allied Health Sciences.

GM Prehab4cancer will be co-designed utilising the latest evidence from around the world. This will be complemented by a strong drive to use digital means to record patient outcomes and improve the ease with which patients can communicate with their clinical teams.

Patient engagement focus groups have been central to our development of this programme.

The programme is expected to achieve the following benefits in the pilot phase of the first 2,000 patients:

- Improved survival
- Reduced complications following treatment
- Improved patient experience and better family satisfaction
- Reduced healthcare and social costs

I am a secondary breast cancer (SBC) patient, who is passionate to raise awareness of the signs and symptoms of SBC, and I have been a User Involvement rep on the breast pathway board for 3 years.

User involvement is very important to get the patient voice heard. You come to the table as an equal and expert from your own unique insight and experience, to help influence decisions, make improvements to the service - for all patients to benefit from.

In addition and from my perspective as a patient, exercise is a hugely important area which I’m involved in. I see the benefits physically and mentally and want other patients and people to experience this.

Over the last 7 years, Greater Manchester Cancer has been the leading alliance in terms of delivering the national Cancer Waiting Times (CWT) targets. However continuing to deliver these targets in an era of a huge year-on-year growth in demand is a core challenge. Several of our hospitals in GM do not currently meet the 62 day performance target of 85%. GM Cancer has taken action on this and in the last year, a comprehensive clinically-led review by Miss Susi Penney, of the hospitals CWT processes and performance has been undertaken. From this work a series of 12 recommendations and actions have been approved by the system in early 2018. Implementation of these, including a review of diagnostic capacity and implementation of the ‘28 day to diagnosis’ across key cancer pathways, should significantly reduce patient waiting times for treatment. These include some new internal targets, diagnostic dashboard, greater clinical involvement including GM-level networking and more co-ordination and communication between elements cancer services across GM.
USE OF PATIENT IMPACT STATEMENT IN MDT MEETINGS: PLEASE LISTEN TO ME

The gynaecological cancer pathway board, led by Dr Lisa Barraclough, in conjunction with the GM Cancer User Involvement Team and Macmillan Cancer Support have, in 2018 developed ‘Please Listen to Me’. This is where a structured patient impact statement is discussed in the consultant treatment planning meeting, or MDT. This allows the doctors to be aware of patient preferences and concerns during the professional discussions about treatment options.

After testing various models and questions, and obtaining feedback, the tool comprises 3 questions that the patient has the option of answering with this then being added to the information available in the MDT.

Please tell us about yourself and the people who are important to you

What are you most worried about right now?

What are the most important things for us to take into consideration about you, right now, when planning your care? (Your answer to this question will be included on the multi-disciplinary team meeting form to inform decisions on planning your care.)

The statement has proved very popular and its use is being expanded during 2019.

MAKEING MDT’S MORE EFFECTIVE

Multi-disciplinary team (MDT) meetings have been central to the management of cancer patients since their inception over 20 years ago. They were introduced to ensure that people affected by cancer had access to the best possible care recommended by a group of expert cancer clinicians. This would also reduce variation in decision-making. These clinicians would meet on a regular basis and discuss patients with cancer, assess their treatment needs, determine suitability for research involvement as well as take into consideration their personal views on the situation. This allows standardised care, team-working, accurate data collection and improved training and research participation.

There is growing evidence both locally and nationally that MDT’s have become less effective due to the growth in numbers of cancer diagnoses and the simple fact that many patients are living longer with cancer and will require discussions around multiple different treatment types. This alone has led to a significant increase in caseload and time spent in MDT meetings. Streamlining MDT meetings has now become a national priority in order to ensure that they continue to function as an appropriate forum for decision-making around cancer care.

GM Cancer has taken part in the national cancer programmes ‘Streamlining MDT Meetings’ project. Our specialist gynaecology MDT, led by Professor Richard Edmondson, has been providing data around time spent discussing patients in MDT meetings as they currently stand. This was then followed by a trial of implementing pre-determined standards of care (SOC) to eligible patients which, although seen by the MDT members, are only discussed by exception. Results of this are expected to inform national guidance and is expected in February. Our thyroid MDT has already piloted SOC’s and estimated almost three-quarters of patients could have a best-practice SOC applied. Our User Involvement Team is also hosting the national cancer team in February to ensure that patients views are clearly and strongly represented in the national guidance. The brain and CNS MDT has moved to digital referrals to ensure accuracy of information prior to discussion. We continue to push for a standardised digital solution to MDT referral and data collection that would be applicable across GM and allow ease of information transfer between all MDT’s.
GENOMICS CANCER SERVICE

Genomics is the study of the body’s genes and how they affect the human body, using a variety of techniques to look at the body’s DNA. The DNA is in effect the ‘instruction manual’ for the body, and sets out how our cells should work.

Genomic technologies represent the real cutting edge of cancer science in 2018 and beyond, opening up new effective ways of predicting and diagnosing cancer, and personalising treatment at an individual level so the most effective treatment is given.

Genomic testing is now being used in Greater Manchester to improve cancer diagnosis and outcomes to great effect. Breast cancer and types of lung cancer are now routinely tested for DNA and genetic changes. The use of genomics is set to expand exponentially in the coming years.

In 2018, we took a significant step forward by Greater Manchester becoming 1 of 7 national genomic hub centres through collaboration across GM, Cheshire and Mersey, and Lancashire. This means that highly complex genomic testing will be undertaken in Greater Manchester for both our population and for neighbouring regions.

In recognition of the increasing role genomics will play in cancer care we have developed a Greater Manchester Genomics Cancer Service and appointed Professor Fiona Blackhall to co-ordinate and lead this work.

As a prelude to developing this service we have played a role in the National 100,000 genomes project (100k), this coming to an end in December 2018. This work, in conjunction with many other centres around the UK, has led to a system being developed to process samples for a full genetic/genomic evaluation for patients with cancer. Over 800 Greater Manchester cancer patients have had samples sent for whole genomic sequencing (WGS) within the 100k project, where the DNA ‘fingerprint’ or sequence is fully determined.

Samples were sent from 17 tumour types and from 5 hospitals across Greater Manchester.

The first human genome was described in 2003 after 15 years of international collaborative work. As a testament to the rapid progress being made in this area, current state of the art facilities can do WGS in 30 minutes.

It seems very likely that within the next 5-10 years all cancer patients will have detailed genomic testing. The opportunity also exists to test people without cancer to help work out their risks of developing the disease and hence to explore ways of people avoiding cancer, or at least reduce their risk of presenting with advanced disease not amenable to cure.

OUTCOMES BASED PRICING OF CANCER MEDICINES

Greater Manchester clinicians and managers have been working closely with Cancer Research UK in 2018 looking at the how we can develop better ways to pay for cancer medicines. Currently the NHS pays for cancer drugs whether or not they work in individual patients.

A proposal for paying for drugs only when they prove effective is being worked up with initial ideas likely to be published in 2019. Industrial pharmaceutical companies are also recognising that payment reform is likely to be required in the coming years. This work ties into the need for creating ‘real-world data’ from patients, where patient outcomes and experience are recorded in a timely way to facilitate a more accurate assessment of how effective each treatment is.

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Initial work shows that patients view survival, disease progression, long term side effects and the time required to return to ‘normal’ activities as the 4 key outcomes of most importance. Any payment structure is likely to involve these 4 principal outcomes.

The Christie is partnering with the pharmaceutical company Roche to take this concept further in 2019. Herceptin, a breast cancer drug, will be assessed with an outcomes based pricing model (in shadow form) in 2019. This will provide the basis for a more detailed assessment of the implications and benefits of this approach using a practical example.
MAJOR DEVELOPMENTS IN GM IN DISEASE-SPECIFIC AREAS

Our disease-specific pathways boards have been very active in 2018, each with a clear improvement plan. These groups have all stakeholders represented so that co-ordinated improvement can be conducted benefitting all patients in our city-region.

Major developments include:

NEW GM BLOOD AND LYMPH NODE DIAGNOSTIC SERVICE

We are delighted to announce the November 2018 launch of this new pan-GM service. For more than 15 years, differences between our individual services have stopped us coming together and working as one. Approximately 50% of our diagnostic samples were sent to neighbouring cities for analysis - now they will all be completed 'in-house' leading to quicker diagnosis and widening the scope for introducing new innovations and research. The rollout of this integrated service will be complete by summer 2019.

I was very impressed with the new service now being set up. I can see that a very high quality and user focused system is being built which will meet NICE guidance and CPR measures.

Dr Robin Ireland - Led a review of service on behalf of GM Cancer Lead Clinician, Department of Haematology, King’s College, London

NEW SINGLE SERVICE FOR OESOPHAGEAL AND STOMACH CANCERS

In 2004 we had 8 centres offering complex surgery for these cancers which meant that no one team developed any real expertise in managing them from a diagnostic or surgical perspective. Over the intervening years the number of sites reduced to 3 but from November 2018, a single integrated service went live. All complex surgery is now on a single site, Salford Royal, whilst all radio- and chemotherapy is coordinated in partnership with The Christie. This development means Greater Manchester has the largest surgical centre for these cancers in Europe, and creates the conditions to have a world class service and has been shortlisted for a prestigious HSJ national award.

BREAST CANCER BISPHOSPHONATES SERVICE

We have known for the last 2-3 years that the bisphosphonate class of medication can significantly reduce deaths in women diagnosed with breast cancer who are over 45 years of age at diagnosis. However this service has been incompletely rolled out with significant variation across GM and indeed England, due in part to the complex funding arrangements for such treatments.

In 2018 we were able to get all localities within GM to agree a single model and a GM-level funding mechanism and the service was launched in spring. All patients get access to the same high standard service wherever they live. This model provides a clear precedent in GM: As we have 10 localities in our city-region, it is possible to develop 10 different ways of offering a new service creating a ‘postcode lottery’. By using a similar method we can hopefully reduce unnecessary variation in cancer care with other services.

NEW IMMUNOTHERAPY CANCER SERVICE: CAR-T

Manchester was one of the first centres to be selected (commissioned) to deliver this new therapy for adults and children in the UK, in late 2018.

The Royal Manchester Children’s Hospital alongside Great Ormond Street Hospital in London were the first 2 units to go on to deliver this new complex immunotherapy, called CAR-T therapy, in November/December 2018 in a type of blood cancer resistant to conventional therapies. Greater Manchester (through Manchester University Foundation Trust and the Christie) is one of a small group of selected centres given permission by NHS England to prescribe this therapy.

This marks the beginning of a new era in personalised medicine and is currently available for children and adults who have advanced blood cancers such as leukaemia and lymphoma where there are currently limited options.

It works by ‘re-programming’ the patient’s own immune system to target the cancer. The medicine is manufactured from the patient’s own cells and then re-inserted back into the body. Immunotherapy techniques such as these are set to revolutionise cancer treatment options across many cancer types in the near future.
PERSONALISED (STRATIFIED) FOLLOW UP

The introduction of stratified care in cancer pathways means moving from set follow up for all patients to a more flexible needs-led model, where appropriate patients are supported to self-manage and receive bespoke help if needed.

Clinically valuable surveillance tests are uncoupled from routine outpatient follow up appointments, and can often be carried out in community settings, reducing the amount of time patients take off work or away from their preferred activities to attend appointments and providing better patient satisfaction.

Other benefits to patients include:

- Reduced anxiety and stress associated with the psychological burden of routine follow up appointments including the travel and parking issues
- Potential earlier detection of recurrence due to patients accessing the system with concerning symptoms, rather than waiting for a future follow-up appointment
- Increased confidence in the ability to manage their own health

Moving to this model will enable around 50-70% of breast, 50% of colorectal, and 30% of prostate patients to self-manage with support, requiring only imaging or biochemical surveillance, and patient initiated contact as required.

Building on the pilot work carried out through the Greater Manchester Cancer Vanguard in 2017-18 and MCIP (Macmillan Cancer Improvement Programme (completed 2018)), GM Cancer aims to continue to roll out new aftercare pathways for breast cancer in 2019. A new project lead will start in February 2019 to drive this process forward and coordinate it across the city.

We continue to develop prostate and colorectal cancer stratified follow up and hope to be able to have a standardised GM-wide approach in these areas as new funding becomes available.

CAN-GUIDE: A NEW TOOL TO HELP PATIENTS DECIDE ON TREATMENT IN ADVANCED DISEASE

Following a successful small Greater Manchester pilot of an enhanced-decision making package called the ‘Goal of Care Initiative (GOCI), we are now setting up an innovatively designed research study to formally evaluate the GOCI tool when used widely in a clinical setting. 800 patients will be studied over 2 years (in 7 types of cancer) from late 2018 with the hope that, if successful, evidence will be developed which supports broader roll out in Greater Manchester and beyond as part of a standardised approach.

This project called can-GUIDE helps patients make complex treatment decisions in advanced disease. The GOCI tool was developed in Greater Manchester as part of the National Cancer Vanguard.

The overall aim of the Can-GUIDE programme is to improve the way information is presented to patients with progressing cancer about the benefits and risks of further systemic treatments (chemotherapy and biological agents), and empower patients to fully engage in shared-decision making.

Can-GUIDE provides patient-centred information about palliative treatment options and incorporates the Goals of Care Initiative (GOCI) tool that captures documented treatment aims in conjunction with what is important to the individual. To help streamline the patient’s care, the GOCI tool is shared between oncology teams, GPs and patients, and can be revisited over time.

A GREATER MANCHESTER LYMPHOEDEMA SERVICE

Lymphoedema is a chronic failure of the lymphatic drainage system resulting in a chronic swelling and can affect any part of the body. It cannot be cured, but early intervention, management and regular self-care can reduce the risk of repeated infection and the lymphoedema becoming more severe, necessitating specialist intervention.

Cancer-related lymphoedema is tissue swelling either due to the cancer itself or related to the cancer treatments, typically surgery, radiation and/or chemotherapy. Previous co-morbidities may also exacerbate this lifelong condition. Many cancers present an increased risk of developing lymphoedema. Early intervention and education for the patient is key throughout the cancer pathway to prevent complexities and help the patient self-manage.

Although Greater Manchester has valuable services for patients, there is variation in access and availability. Greater Manchester Cancer has worked alongside Macmillan Cancer Support to recruit a programme team in late 2018. The programme will develop and propose a co-produced, evidence based model of care. This will aim to provide a sustainable and effective service.
There is a growing demand for palliative and supportive care services both in hospitals and in community settings. Across Greater Manchester, the service has significant variations with some excellent services, and areas where provision is less comprehensive. Constraints include workforce shortages and funding which have not been able to keep up with this growing demand.

Greater Manchester would like to offer a face-to-face senior clinical review and support for all appropriate patients (and their carers) with advancing cancer seven days a week including bank holidays. It is unclear currently which is the best future model to deliver this enhanced comprehensive service.

I am privileged to be working with such an innovative and collaborative partnership of Greater Manchester Health and Social Care through Greater Manchester Cancer, Macmillan Cancer Support, NHS Trusts and Hospices. This 7 day Specialist Palliative Care Programme has been challenging, educational through the lessons learnt and hugely rewarding. Salford and Wigan localities are working arduously to enhance and test potential models of care, always with the patient at the very heart of what they do.

A key element of the programme plan is regular and on-going engagement with system leaders to ensure that decision makers are sighted on the developing 7 day models and are then well placed to make informed decisions in respect of the potential roll-out of a 7 day model across Greater Manchester.

It is hoped that the successes of these innovative models can demonstrate the potential for excellent 7 day specialist palliative care and support across the region.

Salford's Advanced Nurse Specialists team, who as part of the Macmillan Seven Day Face to Face Palliative Care Service in GM, will provide senior clinical face to face support, 7 days a week to patients.

### MACMILLAN RECOVERY PACKAGE

The Recovery Package is a combination of important interventions that, when delivered together, can improve the outcomes and co-ordination of care. A particular focus of the package is to empower patients in terms of giving them additional help and support, educating them about particular issues important to them and their cancer care, and encouraging patients to take more control of their condition.

The implementation of the Recovery Package is led by Macmillan-funded project teams in each Trust, and co-ordinated by GM Cancer.

The recovery package comprises 4 interventions delivered by nurses, hospital doctors and GPs alongside other clinical staff such as psychologists, and allied health care professionals. We also have intent to recruit a significant cohort of Cancer Support Workers. Facilitating these interventions across hospitals, diseases and communities, ensuring their reliable delivery confirmed by data collection and facilitating personalisation requires considerable coordination but we can report good progress is being made.

Highlights during 2018 included:

- Significant increase in the uptake of Holistic Needs Assessments (HNAs), and associated care plans with over 5,000 HNAs on newly diagnosed cancer patients completed in the first 9 months of 2018.

- A suite of templates to aid completion of individualised treatment summaries for each patient have now been agreed by all disease areas with approximately 1,600 plans produced for patients and their GPs in 2018 – this level is expected to rise significantly in 2019.

- Health and wellbeing events are now offered through all main GM hospitals to many new patients after treatment. This is where patients diagnosed with similar cancers come together to network and learn from clinical experts, psychologists, charities and others.

### PALLIATIVE CARE:

#### MACMILLAN SEVEN DAY FACE TO FACE SERVICE

Between the years 2018-2020, Specialist Palliative Care services in Wigan and Salford are being enhanced, through a £2 million partnership co-ordinated by Greater Manchester Health & Social Care Partnership and funded by Macmillan Cancer Support. Specifically the 2 areas will test different models of care, one doctor led, the other led by senior trained nurses, with a thorough evaluation of outcomes and experiences.

It is hoped that the successes of these innovative models can demonstrate the potential for excellent 7 day specialist palliative care and support across the region.
GATEWAYC

Greater Manchester Cancer’s former Vanguard education project, GatewayC, has progressed significantly during the last 12 months. This education programme delivers online cancer courses which focus on recognition of symptoms in primary care, effective referrals and promoting open and honest communication with patients and families to ensure a good patient experience.

GatewayC has added six new cancer courses to its portfolio, including rarer conditions such as Myeloma, to support GPs to recognise early signs in patients. This year, an additional 13 courses will be added to the site, including three Prostate Cancer courses – a high priority pathway across GM.

800 GPs in Greater Manchester are now using GatewayC to improve their clinical decision making. This represents 76% of practices across the Greater Manchester and Eastern Cheshire region, with 94% saying that GatewayC learning will support them with future referrals.

I have spoken to a number of my GP partners who have also completed the learning modules, and they all agree that this is one of the most useful educational experiences they have had. There is evidence that the learning has already begun to change practice.

Following the programme’s early success, GatewayC has now expanded outside of Greater Manchester, to all seven northern cancer alliances and to some alliances in London and the South.

With over 1,500 users UK wide, we are proud to report that this Greater Manchester based development tool is now affecting lives throughout the country.

EDUCATION

The Greater Manchester Cancer Education Strategy makes a commitment to work in ensuring that it has a cancer workforce who are:

- Equipped to engage with the public in cancer prevention and early detection
- Equipped to deliver leading cancer care in the North West and UK
- Equipped to respond to the needs of those affected by cancer through treatment, living with and beyond cancer and into palliative and end of life care

Education is at the heart of delivering this plan. It supports GPs in identifying cancer symptoms quickly, clinical staff in delivering treatments effectively and support staff in delivering the very best care. It is a commitment which affects the whole health and social care workforce to ensure they are empowered to fulfil their potential to raise awareness of cancer risk and support early recognition, and care for people undergoing treatment in the very best way.

Our Vision is that all patients and their families will be cared for by people whose training and support enables them to deliver excellent care.
In the first keynote GM Mayor Andy Burnham shared his thoughts, concerns and hopes for health and social care in GM. The Mayor talked about the importance of the devolved system taking charge and ensuring the focus remains on improvement. He congratulated all those who have contributed to recent improvements in early diagnosis in GM and reminded all that this, as a single factor will support improved outcomes. The Mayor also talked about the importance of prevention, he celebrated the opening of the new Proton Beam Therapy Centre at The Christie and highlighted improvements in after care and support for patients given through the Maggie’s Centres at Oldham and The Christie. Finally Mr Burnham talked about the importance of patient choice and challenging all present to consider how patients can be more involved in their care.

Throughout the rest of the day the programme reflected health and social care developments from both service users and clinical professionals’ points of view; and focused on areas where patient and user involvement in co-design of initiatives had been successful. Topics covered included developments in lung screening services, the new GatewayC primary care education platform, and the latest research into risk and preventing breast cancer by world leading expert Professor Gareth Evans.

THE GREATER MANCHESTER CANCER CONFERENCE

The first Greater Manchester Cancer Conference took place in November at Old Trafford Cricket Ground. Five hundred people from different health and social care backgrounds, including service users, cancer clinicians and service managers, came together to celebrate achievements and hear about and discuss current and future developments in cancer in GM.

The conference started with an inspiring user film focusing on the impact of cancer for our users. Films from users were interspersed throughout the day ensuring that the patient voice was clear. The audience then heard about the National Cancer Strategy 2015–2020 from Professor Chris Harrison, former National Cancer Director, and about progress to date in delivering the GM cancer strategy and aspirations for the future, from GM Cancer leads Dr Richard Preece and Professor David Shackley.

PATHWAY BOARD EDUCATION

Our GM clinical pathway boards have been integral in producing materials for GatewayC to ensure seamless transition from primary into secondary care. Pathway boards also take the lead in setting up education events for those working in their areas, to ensure sharing of best practice, and dissemination of the latest research. During 2018 many of the 22 pathway boards ran events attended by GM professionals and users. Particular highlights include a Skin Pathway event looking the modern surgical and medical management of malignant melanoma, a lung event focusing on multimodality treatments for locally advanced cancer, and an interesting gynaecological event which included sessions focusing on patient experience and how patients can be supported to ‘move on’ after treatment.
A major highlight of the day was Debbie James and Lauren Mahon from BBC Radio 5 “You, Me and the Big C”. The audience were moved from laughter to tears as they heard Lauren and Debbie tell of their experiences, and how they had coped with breast and bowel cancer respectively.

The final talk of the day was a keynote from GM Moving team lead Chris Boardman, the GM commissioner for walking and cycling, who challenged the audience to consider how they themselves get to work and move around the city. This was followed by a lively debate hosted by Professor Rob Bristow, featuring some of the region’s most senior experts. The debate focused on what the teams felt a fictional unexpected windfall of £5 million should be spent on, and contained audience participation and voting.

Posters describing innovation and research were received from over 80 groups across our region; with 12 groups providing stands to inform those attending about opportunities in Greater Manchester. In addition to this, 8 of the GM Cancer Clinical Pathway Boards showcased their work programmes via the Pathway Board poster exhibition, along with some of the GM Cancer Transformation Funded projects.

The key message from the conference was that if we work together as one system, we can be so much more effective in improving cancer outcomes.

Richard was diagnosed with an aggressive form of skin cancer in 2003. Richard was put on a trial at The Christie using a new immunotherapy drug. Within 24 hours of Richard’s first treatment his wife started to notice a huge lump on his neck visibly shrinking. Richard has been cancer free for over 10 years now and hopes that his story will give hope to others living with cancer.

Richard Jackson, 50
In recent years MCRC has catalysed enormous progress, in harnessing a ‘One Manchester’ approach to cancer research and innovation including:

**MCRC CANCER BIOBANK**

The Biobank collects tissue, blood and urine samples from consenting cancer patients across Greater Manchester and stores them centrally. Researchers can then access these samples and use them for research projects. Often the samples analysis can be paired with knowledge about what happened to the patient, and how they responded to the treatments delivered. New findings have continued to be published in the last 12 months which will help develop bespoke or personalised treatments for patients in future.

**NIHR BIOMEDICAL RESEARCH CENTRE (BRC) STATUS**

In 2017, the National Institute for Health Research (NIHR) awarded GM the highly prestigious ‘BRC’ status. Our cancer research reputation and strong cancer programme were important in achieving this award. £12m of funding is now being used in the 3 cancer research areas of Prevention/Early Detection, Advanced Radiotherapy and Precision Medicine with these programmes gaining momentum in 2018.

**THE MANCHESTER EXPERIMENTAL CANCER MEDICINE CENTRE (ECMC)**

The ECMC specialises in early phase clinical research, focusing on patients taking part in clinical trials of the newest anti-cancer drugs which are not yet available as standard of care treatment. The centre continues to be the leading UK site and is still on track to become one of the top three Experimental Cancer Medicine Centres for the delivery of precision medicine in Europe by 2020, through augmentation of its scientific and clinical experimental cancer medicine capabilities by supporting over 500 patients/annum receiving investigative medicinal products.

NIHR Clinical Research Facilities (CRFs) for Experimental Medicine provide dedicated and purpose built facilities, where specialist clinical research and support staff from universities and NHS Trusts work together on patient-orientated experimental medicine studies. All experimental cancer research in Manchester is conducted at the NIHR CRF which is based at The Christie, on behalf of the ‘One Manchester’ NIHR CRF programme. CRF’s give GM patients access to new cutting edge therapies. The facility was recently expanded through a £3m investment to increase the activity and support for this important area of clinical research.

**NIHR PATIENT SAFETY TRANSLATIONAL RESEARCH CENTRES (PSTRC)**

The PSTRC is based at Salford Royal NHS Foundation Trust and continues to work with partner academic and healthcare organisations across the region to focus on research that improves patient safety. This research includes reducing prescription errors, improving diagnosis of cancer and rare diseases and reducing accidents during surgery.

**CENTRES OF EXCELLENCE**

We maintained our highly prestigious Cancer Research UK (CRUK) ‘Major Centre’ status, one of only 3 in the UK, in the last 12-18 months. This is based on our research portfolio, its credibility, past performance and realistic future ambitions. The CRUK Manchester Centre’s research aims to use basic and discovery science to benefit patients through a personalised medicine approach.

Our expertise across all aspects of cancer research has been recognised through the creation of various ‘Centres of Excellence’, many of which partner with other national and international research centres. These include the CRUK Lung Cancer Centre of Excellence, Manchester Breast Centre; Manchester Experimental Cancer Medicine Centre (focusing on the development and testing of the very latest drugs, and identification of which patients would benefit); the Prostate Cancer UK Movember Centre of Excellence and in 2018, the Manchester Centre for Cancer Biomarker Sciences.

A series of leading research institutes have been created in GM which though not cancer specific, have major themes of work in cancer research:

In late 2018, the Lydia Becker Institute of Immunology and Inflammation opened and will play a leading role in developing immunological treatments for cancer. This is one of the fastest growing fields in cancer research and strong research links have been made between this Institution and other cancer researchers to rapidly further our expertise in this important area.

The Stoller Biomarker Discovery Centre opened in 2016 and offers unparalleled facilities for detecting ‘biomarkers’ to turn these into tests to personalise treatments. It is the largest ‘proteomic’ facility in Europe. The neighbouring Manchester Molecular Pathology Innovation Centre aims to translate discoveries into clinically useful tests.
The theme of connecting clinicians, patients and researchers together in Greater Manchester has continued to deepen this year within the concept of ‘Cancer Team Science’ led by our GM cancer research lead, Professor Rob Bristow.

This brings together people with interest and expertise in different fields to formulate a research question, which is highly relevant to today's patients, and develop a plan to solve it. These GM researchers, clinicians and patients focus on different cancer disease sites to identify, simply stated, questions that if answered would be highly relevant to today's patients. This unifies teams of specialists, often geographically separated, around a joint common purpose and reinforces communication and collaboration.

These “town hall” forums were launched in 2018 and involved such disease areas as breast, lung, prostate, skin, gynaecological and blood-based cancers. Scientists, nurses, surgeons, radiation and chemotherapy specialists, imaging and biopsy technicians and importantly patients came together to agree a common challenge, that had a unique ‘Mancunian’ flavour, and would be deliverable within 2-3 years.

The prostate cancer meeting discussed what areas needed research focus, and where Manchester's strengths lay. Patients were able to put their perspectives across. After the morning workshop a consensus emerged to develop a GM-wide database to use to identify patients more at risk of problems. A media friendly headline was constructed that could hopefully describe the project in 3 years' time: ‘Manchester scores for prostate cancer’. This project has now been worked up and sent out for international peer review.

It was really interesting...everyone including patients had their say and were able to put their perspectives across. It's very empowering. It was made as jargon free as possible and my fellow patients were surprised how much they could understand in a room full of experts”.

Mike Thorpe, Service user representative, took part in the prostate cancer “Town Hall”
LIQUID BIOPSIES

Greater Manchester is among a small group of world-leading centres, pioneering a precision medicine method of testing for cancer, namely looking for clues about the cancer in the blood stream rather than in the tumour itself. This liquid biopsy method offers enormous potential to diagnose and monitor cancer, allowing a more specific diagnosis, and earlier detection. It is also often easier to sample blood than to take specimens from often deeply sited cancer growths and could ultimately be offered in the community so patients would not have to travel far to have the test.

Specific biomarkers (detectable substances or DNA sequences that help identify issues relating to the cancer) can be identified from the serum, or circulating cells in the blood. In small cell lung cancer (the most aggressive type) through work led by Professor Caroline Dive’s team, we have now developed the ability to culture circulating tumour cells directly from a lung cancer patient’s blood stream with the goal of doing patient-specific analysis to identify the best treatment for that individual patient. This has the potential to both improve the cancer outcomes and reduce the toxic side effects and inconvenience of ineffective treatments.

DIGITAL RESEARCH INNOVATION

The Christie is working with industry partners to create the UK’s first rapid learning health system for oncology. These partnerships will mobilise and surface real-time patient outcome data, linking genomics data and patient reported feedback whilst extending its utility to the wider healthcare network. We believe these partnerships will catapult Manchester and subsequently the UK to become a leader in Real World Data driven research, discovering and developing the next generation of cancer medicines, realising the benefits of personalised healthcare and contributing to the fulfilment of the UK Government’s Life Sciences Industrial Strategy ambition.

In December 2018, The Christie formed a strategic precision cancer research partnership with Roche, one of the world’s leading biotech companies. Over the next 3 years, Roche will fund up to £20 million to merge cutting-edge genomic technology with data analytics to accelerate the next generation of digital clinical trials in rarer cancers. The collaboration should help Greater Manchester become a leading global hub for clinical research trials.

The precision cancer partnership with one of the world’s largest pharmaceutical companies is an overwhelming endorsement of The Christie and Greater Manchester. We will apply the latest genetic profiling technology with comprehensive real world data to accelerate new research trials in a wide range of cancers.

| Roger Spencer, Chief Executive of The Christie

CELLULAR THERAPIES

There is considerable world-wide interest in developing new medicines based on genes and human cells/tissues. These are called advanced therapy medicinal products (ATMP’s). Such an example would be new immunotherapy medicines like chimeric antigen receptor T-cell (CAR-T) therapies where human immune cells are removed from a patient, activated to certain proteins that attack cancer cells and then re-infused. A Manchester based consortium called iMATCH was awarded £7m of funding from Innovate UK (an arm of government) in March 2018 to streamline the assessment and processes enabling patients to access these new therapies more easily. This partnership is led by The Christie and consists of The University of Manchester, Manchester University NHS Foundation Trust and nine life science focused businesses. Additional related and substantial funding has also been attracted to support national networking in relation to these drugs.

PUBLIC INVOLVEMENT IN DEVELOPING RESEARCH PRIORITIES

The ‘Detecting Cancer Early Research Priorities Survey’ was launched in December 2018 uniquely asking cancer patients, their carers and the public to suggest new areas that scientists can research to detect cancer earlier. This work forms part of the BRC programme and is consistent with the strengthening co-production relationship that is being fostered in Greater Manchester between professionals and patients.

After the survey closes in February 2019, a workshop will be held in summer 2019.

RESPECT-21 STUDY INTO CENTRALISING COMPLEX CANCER INTERVENTIONS

Greater Manchester has paired with London in a 4 year project funded by the National Institute for Healthcare Research. The study has been looking at the reconfiguration of specialist cancer surgery services in the London Cancer and Greater Manchester Cancer areas focusing on changes to bladder, kidney, prostate, and oesophago-gastric cancer pathways. In both London and Greater Manchester, we have moved to fewer centres offering the complex surgery needed by some patients.

The research is taking a mixed methods approach, combining quantitative ‘outcome’ data with qualitative ‘process’ data. We finished collecting data in Greater Manchester in December 2018 and the whole project will be completed in August 2019.
SUMMARY

We would like to thank all the committed patients affected by cancer, clinicians, managers, voluntary community and social enterprise (VCSE) organisations and others who have helped in delivering improved cancer care across Greater Manchester.

As you can see from this annual report, a lot has been achieved due to many people’s hard work and we are indebted to everyone.

2019 promises to be an exciting year and we hope to share progress with you once more, in a year’s time.

Claire O’Rourke & Dave Shackley
Associate Director
Medical Director
on behalf of Greater Manchester Cancer

MERCADO - INTERNATIONAL EARLY DETECTION NETWORK AWARD

In late 2018, Greater Manchester was successful in a highly competitive process run by a leading cancer charity to become 1 of 6 UK and US centres to work collaboratively on large scale cancer research into earlier diagnosis. The GM award is worth several million pounds over the next 5 years. Its principal driving ethos is to foster earlier diagnosis of cancer via early identification of patients often before they have symptoms via new techniques/models (e.g. novel blood markers and new types of selected screening). Its uses the 3 million patient catchment of Greater Manchester, organised through the established comprehensive cancer network and offers selected patients access to the synergistic research power of the MCRC and associated partners. An added advantage of this international network is to be able to offer innovations from other world leading centres to our GM population earlier than would otherwise be the case.

The key lessons learnt, which have been shared in GM, are:

- Major system change is very time-consuming (many years).
- Need to understand why previous attempts may have failed.
- Need to consider carefully the impact of supporting services, and alertness to unintended consequences.
- The importance of engaging stakeholders from all professions and levels at all stages.
- The importance of leadership from the top and throughout the system.
- Centrality of clear honest communication at all stages.
- Involving patients and families at the appropriate points.

FUTURE CONTACT INFORMATION

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GM CANCER AREAS OF FOCUS

- Reducing the risk of cancer
- Diagnosing cancer earlier
- Better cancer care for everyone
- Improving your quality of life with and after cancer
- Joining everything together
- Providing you with a better experience

One example of work from the project includes a survey based on a questionnaire with patients and professionals (including people from Greater Manchester). This explored what aspects of reconfigurations of services such as centralisation matter most to people. Patients, health professionals, and the public all had similar preferences.

The risk of complications, risk of death, and access to a team of cancer specialists were most important to people. Travel time was least important, and participants were willing to travel for longer to have better care and outcomes: they were willing to travel, on average, 75 minutes longer in order to reduce their risk of complications by 1 per cent, and over 5 hours longer to reduce risk of death by 1 per cent. This is an important finding as previous to this there was little published work to guide the relative importance of differing factors when making major system changes.