

Welcome to Neighbourhood News

Welcome to the eleventh issue of Neighbourhood News - a newsletter from the Manchester Cancer Research Centre (MCRC) to keep our neighbours up to date with developments and news from the MCRC and the new cancer research building for MCRC scientists. The newsletter is distributed to over 2,000 households in the local community and is produced every two months. We hope you find Neighbourhood News informative and helpful.

Inside this issue

- ▶ Lung cancer patients will benefit from more research
- ▶ Cancer Research UK launches visionary new Lung Cancer Centre of Excellence
- ▶ Proposed parking restrictions and green travel
- ▶ 'Liquid biopsy' offers new way to track lung cancer
- ▶ Summer focus on the latest melanoma research
- ▶ Construction update
- ▶ Withington Green

About the MCRC

- Formed in 2006 by The University of Manchester, Cancer Research UK and The Christie NHS Foundation Trust, the MCRC coordinates basic, translational and clinical cancer research across its partner organisations
- The MCRC is home to the world's largest early phase clinical trials unit - based within The Christie - providing unique opportunities for local patients to access the latest and most innovative cancer treatments more rapidly
- The new MCRC building has been designed to facilitate collaboration between researchers to speed up the translation of laboratory discoveries into clinical trials

Find out more about the new cancer research building and the MCRC here:

www.mcrc.manchester.ac.uk/newbuild/

Neighbourhood News

Lung cancer patients will benefit from more research



As Manchester and UCL are jointly awarded CRUK Lung Cancer Centre of Excellence status, Jackie Mills shares her lung cancer journey to highlight the need for even more ground-breaking research to improve outcomes for lung cancer patients.

Back in 2011, aged just 43, Jackie Mills from Middleton was diagnosed with lung cancer. In February that year, after feeling very unwell and suffering from severe joint pain, Jackie went to her GP several times over a period of months and was thought to have arthritis.

In May, Jackie collapsed in extreme pain and was rushed to hospital, where a doctor took one look at the characteristic clubbing of her fingers - often associated with lung cancer - and ordered an immediate chest X-ray. Subsequent scans and a biopsy confirmed the diagnosis of lung cancer.

"The diagnosis was a big shock. Unfortunately, because of complications leading to treatment delay, the cancer had spread so I had

to have the whole lung removed," explained Jackie. After surgery, Jackie had three months of chemotherapy at the Cecilia Centre - a specialist unit for lung cancer patients at the University Hospital of South Manchester NHS Foundation Trust in Wythenshawe. Jackie is now cancer free but her experience has changed her.

"Even though physically I can't do as much as I used to, I feel lucky to be alive. I respect and enjoy everyday things more than ever and am still very positive," she says. "I met some wonderful people and other patients going through the same experience. Sadly, too many have lost their battle. More research into lung cancer and understanding why treatment works better in some people than others is vitally important. My hope is that more research leads to more people surviving," said Jackie.

Find out more about More Tomorrows and how you can get involved with fundraising for the new MCRC building here: www.moretomorrows.org

Cancer Research UK launches visionary new Lung Cancer Centre of Excellence

Leading researchers from Manchester and London have been brought together in a ground-breaking new Cancer Research UK Lung Cancer Centre of Excellence that highlights a renewed focus to beat lung cancer.

Despite notable advances, development of better treatments for patients with lung cancer has lagged behind other cancers, with little improvement seen over time due to its complex biology, resulting in poor survival rates. The Centre of Excellence will unite the complementary strengths of the individual research hubs into one new research entity with a single strategy for driving progress in lung cancer. Along with the recruitment of top international scientists and a rigorous training programme to develop promising young researchers, the Centre will make the UK a global research leader in this very important disease.

Professor Caroline Dive, Manchester lead from the Cancer Research UK Manchester Institute based at The University of Manchester, said: "We

are delighted to have been chosen as Cancer Research UK's first Lung Cancer Centre of Excellence. By establishing the Centre jointly at Manchester and UCL, we are bringing together internationally renowned expertise across the full spectrum of lung cancer research."

The new initiative will build on expertise in Manchester in optimising radiotherapy, discovering new cancer drugs and developing cancer biomarkers, which circulate in the blood stream and can be used to monitor a patient's disease. They will work closely with scientists at UCL who are leading research into harnessing the body's own immune system to fight the disease. UCL researchers are also investigating the genetic variations that drive differences in cancer behaviour within the same tumour and between different people, and change during the course of the disease.

Collaboration is the key to the success of the Centre. It means researchers who do not normally work together can exchange ideas and information more easily and increases the number of patients they can work with across two cities. It also means they have access to a larger resource of tissue samples as well as the ability to conduct larger, more complex clinical trials.

"As we have seen with the success of the MCRC model, partnership is critically important to accelerate understanding and progress in multifaceted diseases like lung cancer. Partnership also facilitates the development of more

personalised treatment approaches that target the individual nature of each lung cancer patient and their disease. The overarching aim is to develop new tests for early detection and better treatments for cancer patients so that we can improve outcomes and save lives," said MCRC Director Professor Nic Jones.

Find out more about the new CRUK Lung Cancer Centre of Excellence at Manchester and UCL here:

www.cruk Lung Centre.org



Lung cancer in the North West

- Lung cancer is the most common cause of cancer death: in Greater Manchester alone, approximately 900 men and 800 women die from the disease every year.
- According to recent CRUK figures, lung cancer rates in women in the North West have risen by nearly a quarter over the last twenty years while those in men have fallen by around a third over the same period and nearly a fifth for people overall. These figures largely mirror changes in previous smoking rates.

Proposed parking restrictions and green travel

As residents will be aware, consultation for the proposed parking restrictions being introduced by Manchester City Council on residential streets around The Christie, closed on 9 July 2014.

The proposed scheme will now go to the Chief Officer and Executive

member of the Council for their approval, before going to legal notice. Manchester City Council has informed The Christie that, subject to any appeals or concerns, the proposed restrictions are expected to be implemented in September/October 2014.

As a hospital located in a busy, residential area, The Christie continues to work with staff to encourage them to use alternative forms of transport where possible and has recently held a personal travel planning event for staff to support them with this. The Trust has also updated its green travel plan

with the aim of realising 60% of staff using sustainable modes of travel by 2030.

For those who cycle or would be willing to cycle to The Christie, the Trust has recently secured funding to refurbish its existing showers and to build new ones. It is also working with external providers to obtain even further financial discounts for public transport for staff. Other options being considered include off-site car parks with shuttle buses that will bring staff directly to The Christie. We will continue to keep our neighbours informed of all developments.

Liquid biopsy' offers new way to track lung cancer

Scientists have shown how a lung cancer patient's blood sample could be used to monitor and predict their response to treatment – paving the way for personalised medicine for the disease.

The study also offers a method to test new therapies in the lab and to better understand how tumours become resistant to drugs.

In many cases of small cell lung cancer (SCLC) the tumour is inoperable and biopsies are difficult to obtain, giving scientists few samples with which to study the disease. Now MCRC scientists have explored the potential of using circulating tumour cells (CTCs) – cells that have broken off from the tumour and are circulating in the blood – to investigate a patient's disease in a minimally invasive manner.

The researchers found that patients with SCLC had many more CTCs in a small sample of their blood than patients with other types of cancer. Importantly, the number of CTCs for each patient was related to their survival – patients with fewer CTCs in their blood lived longer. Armed with this new insight, the Manchester team are developing disease models to better understand why so many SCLC patients acquire resistance to chemotherapy and to search for and test potential new targeted treatments.

Summer focus on the latest melanoma research

New clues to skin cancer development show sunscreen is not enough

A team of Manchester and London scientists has shown that sunscreen alone cannot be relied upon to prevent malignant melanoma, the most deadly form of skin cancer.

The findings support the approach taken by public health campaigns recommending a combination of shade and clothing to protect skin, while using sunscreen on areas that can't be covered.

The research has shed new light on the mechanism by which UV light leads to melanoma and also explores how effective sunscreen is in preventing UV light from damaging healthy cells. Crucially, the researchers show that UV light causes faults in the p53 gene, which normally helps protect from the effects of DNA damage caused by UV light.

The study also showed that although sunscreen can greatly reduce the amount of DNA damage in p53 caused by UV, thereby delaying the development of melanoma, it did not offer complete protection. These findings highlight the importance of combining sunscreen with other strategies to stay safe in the sun.

Shedding light on drug resistance in metastatic melanoma

Despite advances in therapies for melanoma, some treatments can cause the cancer to progress after patients have stopped responding to treatment.

Using a combination of targeted therapies to overcome this may be more effective, according to Manchester research.

Around 50% of melanoma cases are associated with a mutation in a gene known as BRAF. Although drugs that work by inhibiting BRAF have increased

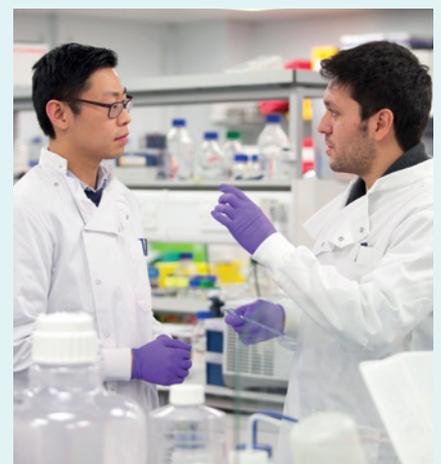
survival in patients with this mutation, many eventually develop resistance to treatment and their disease returns. MCRC researchers have explored what happens in melanoma cells after inhibition of BRAF.

Professor Richard Marais, from the Cancer Research UK Manchester Institute at The University of Manchester, who led the research, said: "We wanted to understand how these drugs might induce unwanted effects in melanoma cells – particularly in cells that also have a mutation in the RAS gene." The group found that BRAF inhibitors re-activated certain cellular pathways

leading to resistance to therapy and caused RAS-mutated melanoma cells to change shape and become more invasive, allowing them to spread throughout the body.

"We found that we could counteract this behaviour by adding a second drug to the BRAF inhibitor – one that targets MEK. It looks like our study further supports the combined use of both BRAF and MEK inhibitors in melanoma patients," added Professor Marais.

Malignant melanoma is now the fifth most common cancer in the UK, with more than 13,000 people being diagnosed with the disease every year. Skin cancer research is one of the MCRC's key focus areas.



Construction update



M+W GROUP

Work on the new MCRC building is progressing well and is now in the final phase of construction.

The external facade is nearing completion, as is the paving along the Cotton Lane side of the site. Internally, many of the primary utility services have now been installed - including gas, water, ventilation systems, pipework and cable trays. Much of the raised access flooring

in the office block has also been finished and the ceilings and doors are currently being installed.

Over the next few weeks, the project team will be focusing on completing the landscaping, external facade, plant rooms and internal fit out. The project is on course for the MCRC to begin occupying the building this winter.

Working hours

Construction work will be carried out on site from 08.30 to 17.30 from Monday to Friday, although personnel will access the site from 07.00. A small team will progress with the internal fit-out works from 17.30 to 20.00 from Monday to Thursday but will be restricted to quiet working. The need to work extended hours is currently under consideration. If this is deemed necessary the works will be contained within the building (not outside) and robust measures will be implemented to avoid any disruption to the local residents. The MCRC contractor, M+W Group, will circulate leaflets to all residents surrounding the site to ensure that they are informed of any such changes.

Deliveries to site will be between 10.00 and 16.00 from Monday to Friday. No deliveries are currently planned on Saturdays and Sundays.

Timeline

- ▶ **November 2012**
Breaking the ground event marks start of construction
- ▶ **November 2013**
Topping Out ceremony marks completion of the highest point of the building
- ▶ **January 2014**
Building weather-tight enabling internal works to progress
- ▶ **June 2014**
Visitor Centre removed to allow completion of the external landscaping
- ▶ **Winter 2014**
Building completed and ready for use

Building facts

- The MCRC research building incorporates a central lightwell to allow daylight to penetrate through the centre of the building and reduce the amount of artificial lighting needed during daylight hours
- External solar shading and opaque glazing panels feature to areas of the east, south and west facing glazing to help control and limit the amount of heat from the sun that builds up in the building whilst allowing optimal benefit from daylight penetration

Contact us

For queries about the MCRC or general questions about the new cancer research building you can email us on newbuilding@mcrc.man.ac.uk or call **0161 446 3111** during office hours.

For queries about construction, or issues related to work on site, you can contact David Day, M+W Group Project Manager, 24 hours a day, by calling **07770 667 899**.

Withington Green

The works to re-landscape Withington Green have unfortunately been delayed. Preparations are currently underway and work is now expected to commence this summer.

