

Revolutionary clinical trial is launched

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The University of Birmingham is today launching the CR-UK's Stratified Medicine Programme which will combine a revolutionary clinical trial aimed to advance lung cancer treatment. This trial has been made possible thanks to CANCER RESEARCH UK partnering with pharmaceutical companies AstraZeneca and Pfizer to create a pioneering clinical trial for patients with advanced lung cancer – marking a new era of research into personalised medicines to treat cancer.

The 'National Lung Matrix' trial – scheduled to open later this year at centres across the UK* – will give researchers unprecedented access to libraries of drugs developed by AstraZeneca and Pfizer, allowing several to be tested at the same time, within one trial.

Researchers will use the genetics of each lung tumour to identify small groups of patients who, because of the specific genetic changes causing their cancer, are more likely to benefit from a certain drug.

They will then look for signs of improvement, such as increased survival, tumour shrinkage or an alleviation of symptoms. Medicines that show promise in the small groups of patients may be fast-tracked into larger trials involving more patients with the same genetic changes. And new medicines can be added to the existing trial as new experimental treatments filter through from the lab.

Over the course of the trial, up to fourteen medicines could be included; up to 12 from AstraZeneca and its biologics research arm MedImmune, and two from Pfizer. These medicines target very specific and often rare mutations, meaning they could offer hope for patients who would otherwise have very limited treatment options.

Cancer Research UK, AstraZeneca and Pfizer are jointly funding the programme, with support from the NHS. In total this represents about £25 million worth of research.

Dr Harpal Kumar, Cancer Research UK's chief executive, said: "This is a very important step forward in the fight against cancer. This partnership is exciting because we're trying to achieve something that none of us could manage alone – targeting treatments towards the patients who we know are the most likely to benefit. It's also a programme that can uniquely be carried out in the UK, because of our National Health Service and the network of Centres across the country supported by Cancer Research UK.

"We know that every patient's cancer is unique, so we're now moving away from a 'one size fits all' approach and instead striving for more personalised treatment. Critically, we are shifting the emphasis from designing a trial around a specific drug, to designing it around selecting from a range of drugs for a specific patient. This trial will be for lung cancer patients but we hope that in the future stratified medicine will lead to dramatic improvements for all cancer patients, with more treatment options and a better chance of beating the disease.

"This work represents a new approach to delivering stratified medicine research and this collaboration between Cancer Research UK, AstraZeneca, Pfizer and the NHS will be key to overcoming the challenges of delivering it."

The trial, led by chief investigator Professor Gary Middleton in conjunction with the Early Drug Development Team at the Cancer Research UK Clinical Trials Unit at the University of Birmingham, will build on the first phase of Cancer Research UK's Stratified Medicine Programme. This established a way for NHS hospitals to routinely test tumour samples and use this information to help match cancer patients to the most appropriate treatment.

Menelas Pangalos, Executive Vice President, Innovative Medicines and Early Development at AstraZeneca said: "At AstraZeneca we believe that targeted therapies which address the underlying mechanisms of disease are the future of personalised healthcare. It's an approach that will allow us to push the boundaries of science and, not only to bring the right treatment to the right patient, but also to uncover new treatments for those who currently have limited options. Ultimately, this innovative collaboration will help establish the framework for how patients will be treated in the NHS in the future, giving them a considerably higher chance of receiving an effective drug to tackle their cancer."

Dr Mace Rothenberg, senior vice president, Clinical Development and Medical Affairs, and chief medical officer, Pfizer Oncology, said: "Pfizer is committed to working with partners around the world to improve the development of oncology therapies, and we are proud to be partnering with Cancer Research UK and AstraZeneca on this important trial.

"As our understanding of cancer biology has evolved, we have learned that targeting the genetic abnormalities within a cancer can lead to meaningful improvements in care for that disease. Today, the research community is grappling with the most efficient and effective way to conduct clinical trials and deliver new medicines to patients in this new world of stratified medicine. We believe the innovative design of the National Lung Matrix trial may hold significant potential for patients with advanced lung cancer."

Jeremy Hunt, Health Minister, said: "By investing £11.5million a day into research and development for the life sciences we have made this country one of the best places in the world to carry out and invest in clinical trials, which has made ground-breaking programmes like this possible. Cancer Research UK's Stratified Medicine Programme will see top scientists work with industry and the NHS to collaborate on innovative, life-saving research, and I look forward to the benefits this will bring for cancer patients and their families."

Professor Gary Middleton, chief investigator based at the Cancer Research UK Clinical Trials Unit in Birmingham, said: "This is one of the largest ever personalised medicine trials in any cancer, one which attempts to match the right treatment to the right patient based on an in-depth understanding of what makes their own cancer cells grow and survive.

"For our patients, it's a tremendous opportunity to access a wide-range of therapies tailored specifically to their particular type of lung cancer. For people caring for lung cancer patients in the UK, it's exciting to be able to offer these treatments to patients when they're still at a very early stage of clinical development.

"With this Matrix trial, cancer medicine in the UK now becomes a key global player in the search for more effective targeted therapies for people suffering from this devastating disease."

Professor Peter Johnson, Cancer Research UK's chief clinician, said: "The exciting progress we've made in understanding how cancers develop gives us hope that specifically targeting faults within patients' tumours could revolutionise medicine in the next decade. These precision medicines hold huge promise but give us a particular challenge: how can we find the few cancers most likely to respond in time to give them the right treatment? This unique partnership will allow us to look for molecular targets across hundreds of cancers, and find out as early as possible which new treatments can help patients."