Integrated Early Diagnosis

Earlier diagnosis is at the heart of the UCLH Cancer Collaborative (part of the national Cancer Vanguard). Earlier diagnosis has an important role to play in improving survival, especially in lung and colorectal cancers. Since our launch earlier this year there has been good progress across our earlier diagnosis programme in the following areas:

1. **Lung cancer**: the UCLH Cancer Collaborative proposal for introducing a lung health check and low dose CT diagnostics for patients at high risk of lung cancer has been endorsed by the North Central London Cancer Commissioning Board. In
parallel, through our academic partner UCL, work is underway to develop a clinical trial that would be open to patients across the region and offer this approach alongside developing a non-invasive cancer diagnostic test.

2. **Colorectal cancer**: measuring blood in the stool (a test known as "qFIT") provides a relatively low cost approach to improving diagnosis for patients with symptoms that may suggest bowel cancer. If the test is negative, then it is extremely unlikely that the person has colorectal cancer and they can avoid a more invasive test. The UCLH Cancer Collaborative has set up a trial which includes six hospitals across the region and over 30 GP practices. It will test how this approach, that has already undergone rigorous evaluation in Scotland, can be implemented in NHS services in London.

3. **Multidisciplinary Diagnostic Centres (MDCs)** aim to provide a rapid diagnosis service, one stop where possible, for patients with non-specific but concerning symptoms, such as unexplained abdominal pain, weight loss or painless jaundice. Launched in June 2016, the UCLH pilot site has now seen over 216 patients in the first 16 months. So far, 18.4% of patients received a new significant diagnosis. For those who received a cancer diagnosis (3.4%), the average time from referral to results communicated to patients was 27 days. Working with partners at North Middlesex, BHRUT and Southend hospitals we plan to launch three new MDCs across the region in 2017. The MDC pilot was highlighted in the national strategy ‘One year on’ report which was published in October.

4. **Education and awareness**: On 22 November the UCLH Cancer Collaborative with Macmillan Cancer Support will be holding an event, *Getting it right: Approaches to promoting earlier diagnosis – the national perspective*. This will explore local and national initiatives promoting public awareness of cancer and in particular the importance of earlier diagnosis. The event is aimed at providers, public health and CCG commissioners, academic research partners and anyone working to improve the public’s awareness of cancer in north and east London and West Essex.

In addition to the UCLH Cancer Collaborative programme, there has been success across the region in bids submitted in August to access investment from the national Diagnostic Capacity Fund. All five bids submitted have received funding:

1. Imaging utilisation: led by Whittington Health, awarded £355,672
2. Lung pathway redesign: led by Royal Free London, awarded £373,500
3. Radiographer reporting: led by Homerton, awarded £151,000
4. Template biopsy: led by BHRUT, awarded £129,500
5. Colonoscopy improvement: led by Barts, awarded £220,264

**London Cancer**

In June work began to develop a single set of best practice timed cancer pathways across the region. These hold the potential to improve the patient journey for those patients requiring care across multiple hospitals by providing clear timelines by which appointments, diagnostics, clinical decision making and treatments should take...
Progress is being made across our geography to implement stratified follow-up. This approach aims to improve patient experience, outcomes and quality of care by tailoring aftercare to support individual needs and working with patients to self-manage aspects of their care where appropriate. Senior Programme Manager for the Macmillan Integrated Cancer Programme, Sharon Cavanagh, is working with leads across North Central London and the Transforming Cancer Services Team for London to develop a service specification and business case for implementing ‘primary care led stratified follow-up’ for men with stable prostate cancer. The aim is to introduce this model of follow-up on April 1 2017. Sharon is also on the North East London prostate stratified follow-up working group. The first planning for this is being held on 16 November.

Cross cutting work continues on optimisation of multidisciplinary team meetings and developing leadership roles for tumour pathways. This is led by Prof Muntzer Mughal, London Cancer pathway director for OG cancers, and supported by Jake Goodman.

New Models of Care

The new models of care agenda seeks to change how different providers organise themselves in order to improve patient access, service viability and quality. Specific programmes of work concern provision of chemotherapy and radiotherapy.

Congratulations to Dr Rebecca Roylance and pharmacist Pinkie Chambers who have been leading a Denosumab self-administration pilot with the north central London commissioning support unit. Some women with breast cancer need to be treated with Denosumab if the cancer has spread to their bones. The pilot pathway enables patients with breast cancer to self-administer Denosumab if they wish to and will form part of a business case proposing an alternative commissioning pathway for the drug. The first patient was recruited to the pilot in September.

Medicines optimisation is a theme within the national Cancer Vanguard and this is part of our work locally on New Models of Care and the Centre for Cancer Outcomes. A challenge was presented to the pharmaceutical industry to work with UCLH, the Christie and Royal Marsden to enable us to make better use of our medicines. Six pharmaceutical partnership projects are scheduled to begin in the coming weeks. The first partnership for the UCLH Cancer Collaborative is with Amgen and will model Denosumab delivery in different community scenarios.

Centre for Cancer Outcomes

The Centre for Cancer Outcomes continues to progress work to develop the Multidisciplinary Team (MDT) level balanced scorecards in order to provide an effective mechanism to feedback outcomes information, alongside other key service metrics, to MDT members. The Centre has also identified three research priorities encompassing:
1. Lung cancer outcomes in over 65s
2. Utilising Cancer Outcomes and Services Dataset (COSD) data on interventions in the last 30 days to inform pathways
3. Developing a model to demonstrate cost and value across an entire pathway.

Work on this agenda from the Centre for Cancer Outcomes will help set out how NHS providers and multidisciplinary teams can make best use of outcomes data to inform decisions on clinical practice and service design. Our approach to using cancer data to understand outcomes of whole pathways of care was presented by the chief medical officer, Kathy Pritchard-Jones, at the recent National Cancer Research Institute conference in Liverpool.

Cancer Academy

In October the UCH Cancer Fund received a donation of £88k from one of their charity partners Amplifi, who dedicated their inaugural media industry fundraising ball to the sole purpose of funding the launch of the Academy. We are delighted that the UCLH Charity trustees have also agreed to donate £95k. A Steering Group has convened twice since to inform and oversee the launch and implementation of the Academy, with a broad membership encompassing the UCLH Institute, UCL, patient representation and representation across professional disciplines. The amount raised brings us an important step closer to the formal launch of the Academy, which will provide a range of programmes for patients and staff working in cancer services at UCLH. Our long term ambition is for the Academy to serve patients and staff across the region.

Precision Cancer Medicine

Together UCLH and UCL are now the leading European centre developing and delivering cellular therapies for cancer patients, with only the US currently recruiting more patients to clinical trials. We have established world class scientific and clinical programs exploring both cell therapy and gene therapy to target cancer. These approaches include cutting edge novel therapies using a combination of chemotherapy and genetically-engineered immune cells, including CAR-T cells and TCR gene-modified T cells. These different approaches are being tested in multicentre, international phase I/II trials led by UCLH Consultants, Professor Morris, Professor Peggs, Dr Pule and Professor Chakraverty and their teams.

In parallel, Professor Swanton and Dr Quesada’s teams have been trying to understand why even within the same tumour mass it is frequently observed that only a proportion of the malignant cells are responsive to the cancer therapy. As a result, not all cancer cells are eradicated and relapse of the disease is inevitable. This is referred to as ‘tumour heterogeneity’ and it has profound implications for understanding tumour evolution and importantly, for predicting whether new targeted immunotherapies will be effective.

The clinical translational research programs of the team underpin the ongoing success of the UCLH NIHR Biomedical Research Centre and the CRUK Experimental Cancer Centre. Of note, the recent award of £111.5 million to the UCLH NIHR BRC for the period 2017-2022, emphasized the exploitation of world class pre-clinical science
in gene therapy, tumour immunology, tumour heterogeneity and cellular immunotherapy, including stem cell transplantation and our proven ability to deliver vanguard immunotherapy trials in cancer patients. The UK Government’s own announcement referred to medical breakthroughs achieved by Biomedical Research Centres in the UK, including:

- genetically engineering patients’ own cells to attack cancer
- gene-edited immune cells to treat ‘incurable’ leukemia
- clinical trials of new T-cell treatment for cancer
- MRI brain scans to detect early Parkinson’s
- detection of the early signs of Alzheimer’s disease
- multi-gene DNA sequencing to help predict cancer patients’ responses to treatment
- new immunotherapy trial to test cancer vaccine

All of these breakthroughs were developed at UCLH, and 5 of the 7 highlights were delivered by the Cancer Immunotherapy team.