UCLH Cancer Strategy
2015-2020

Complete Cancer Care
“Our mission is to deliver top quality patient care, excellent education and world-class research.”
“The **UCLH Cancer Strategy** is the foundation of the Comprehensive Cancer System we are building to benefit all of the cancer patients and healthcare professionals across the region and beyond.”

Professor Kathy Pritchard Jones, Chief Medical Officer, UCLH Cancer Collaborative and *London Cancer*
“UCLH is proud to be the system leader for cancer and is committed to working with our partners to deliver the best outcomes and experience for patients with cancer across the whole sector.”

Dr Kirit Ardeshna, Clinical Director, Cancer Division, UCLH and Consultant Haemato-oncologist
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Foreword

Improving the care and outcomes for all our cancer patients and their carers has been, and will remain, our focus. I believe this truly shines out in our cancer strategy.

It has been hugely exciting leading and working with so many dedicated people to develop and deliver this and the energy encapsulated within is very real. This can only be achieved through a powerful and vibrant team and our staff have been amazing. Their dedication to our objectives and values has been superb and the team building between clinicians, allied health professionals, patients, managers, carers, administrators, researchers and volunteers is what makes this all happen. UCLH Cancer Collaborative, as part of the national cancer vanguard is now leading and working with all the other hospitals and with primary care, commissioners, public health and charities across north central and north east London to improve cancer outcomes, advance cancer research and raise cancer patients’ experience. This will be a living strategy but the aims and objectives for excellence remains constant.

Professor Geoff Bellingan, UCLH Medical Director, Surgery and Cancer
Six new programmes of work will provide focus and drive for many of the strategic objectives.

Together these are essential in realising the ambition to be the best cancer centre in Europe.
Philanthropy is all around us at the UCL Cancer Institute. Donors have supported our staff, our students, and the building in which we work. But the real impact of philanthropy is that it gives us the freedom to think – and do – differently; that is where breakthroughs happen.”

Professor Tariq Enver

The future of treatment for patients is precision cancer medicine – a treatment package that is specific to the individual and which applies our whole suite of tools to the understanding and treatment of a patient’s own unique cancer. It is our vision that, within five years, every patient will have their own personalised cancer pathway, from early diagnosis and screening, to imaging or biopsy, to genomic analysis of their cancer, through to state-of-the-art clinical trials.

This second Institute will build on the underlying cancer science at UCL, and will provide a physical focal point for cancer-relevant expertise across the medical, life and engineering sciences. Patients will be brought alongside the research process and real-time analysis of patients will help to continually refine and improve emerging treatments. These plans underline UCLH’s commitment to providing the best comprehensive cancer research and treatment in Europe, and UCL’s commitment
to translating world-class science into improvements in patient and population health.

The aim of the new Institute is to detect cancer earlier and more precisely, to understand the molecular biology of patients’ cancers more precisely, and to develop and deliver clinical trials more precisely. This is the future of cancer care – relevant to the individual.

A new, state-of-the-art facility for precision cancer medicine in the heart of London

This new building will be at Mortimer Market, close to the Cancer Institute’s Paul O’Gorman Building and within the Bloomsbury hub of research and clinical institutes. UCL has committed £25 million to develop the new building, and we will be seeking support from committed donors to help deliver the project over the coming years.

Building capacity in precision cancer medicine

While the new building is being planned, our priority is to build capacity by making appointments across the areas relevant to precision cancer medicine, including a new Chair-level recruit to lead our emerging Proton Therapy research programme, and in creating Fellowships for talented early-career cancer researchers.
1.2 Cancer Academy

Knowledge, expertise and understanding are the foundations for effective staff and patient experience. The new Cancer Academy will drive improvements in both staff and patient experience through high quality, targeted programmes.

Following stakeholder engagement we have identified key areas of need to focus on. The proposal is the Cancer Academy is composed of four Schools encompassing the following areas:

1. Patient Empowerment and Involvement
2. Multidisciplinary Cancer Team Effectiveness
3. Experimental Cancer Research
4. Cancer Professionals
1.3 London Cancer

This strategy builds on the existing clinical system leadership and patient involvement across organisations to further improve cancer pathways between acute providers and from and into primary care.

Partnership and patient engagement amongst secondary and primary care providers in the sector is strong through London Cancer’s 14 Pathway Boards’ work. As set out in our cancer vanguard application, this approach will amplify and enhance operational traction with ambitious whole pathway improvements in common cancers.
where our providers have agreed to aim for the best in Europe standards. Primary care will be enabled to play a key role in supported self-management. This work will make significant improvements in reducing variation in clinical quality and financial sustainability.

Our approach starts with patients not organisational boundaries. We will work with patients, local hospitals, federated GP practices and community providers so that GPs and patients will be able to have quicker, direct access to cancer diagnostics and advice close to home, working to deliver the new NICE guidance as quickly as possible. Modelling need and capacity we will enhance local access by investing in more diagnostic capability (potentially mobile) and increased public education at the point of contact to improve earlier diagnosis and therefore improve outcomes.

“Working together in partnership across London Cancer has enabled a number of initiatives to improve patient care and experience. We are currently working with trusts and commissioners to implement our specification for the optimal breast cancer pathway, to ensure that women receive high quality care wherever they access our system.”

Dr Rebecca Roylance

Dr Rebecca Roylance,
Consultant Medical Oncologist, UCLH and London Cancer Breast Tumour Pathway Board Director
1.4 New models of care

The Dalton Review (2014) presented a compelling case for the development of new models of service provision which break through organisational boundaries to deliver better care for patients. UCLH Cancer Collaborative is working closely with North Middlesex University Hospital to establish a single provider model in radiotherapy between the two hospitals. The evidence available indicates significant benefits will result from:

- Service resilience: for instance in relation to recruitment and retention of Radiography and Physics staff.

“The Radiotherapy Physics team have supported the development of the North Middlesex Radiotherapy Physics service in oversight and management of the local team. This has helped align the two departments in sharing best practice and has strengthened a collaborative approach between the two trusts. Our future plans involve commissioning four new replacement linacs and developing the National Proton Beam Therapy Service at UCLH. This will present a significant training opportunity and will help maintain our excellent recruitment and retention statistics.”

Derek D’Souza, UCLH Head of Radiotherapy Physics.
• Flexibility of capacity to respond to fluctuations in demand: spikes in demand for one service can be managed across the capacity of both sites. A similar principle applies to linac downtime relating to repair and maintenance. This will support delivery of cancer access standards.

• Financial benefits from realising economies of scale: for example through a single management infrastructure and leveraging more competitive supplier relationships.

• Financial benefits from efficient allocation of resource: should there exist redundant capacity within the service, this may present financial benefits in relation to pay, non-pay and capital.

• Research: the new service will provide a level of scale which enables us to attract new research opportunities from commercial and grant awarding organisations. This will help drive improvements in patient experience and outcomes.

Realising a distributed model with access to trials locally (as with the Tracer X study) is important to this agenda.

• Recruitment, training and development: the new service can be developed to provide staff with excellent opportunities for training and development through exposure to a comprehensive range of tumour sites, paediatric radiotherapy and (from 2019) proton beam therapy. The scale of the new service will also provide more long term opportunities for staff to develop their careers, thus improving our retention of scarce workforce.

• Outcomes and quality: the new model should deliver improved outcomes and experience for patients.

We will also work with partners to develop a prototype for providing chemotherapy for patients in GP settings. Our collaboration through the national Cancer Vanguard with, the Royal Marsden and The Christie will help inform this agenda.
1.5 Early diagnostics

Improving early diagnosis is recognised as the single most important factor for the UK to improve cancer patient survival. The Cancer Vanguard sets out the high level plans for making a step change in diagnosis for patients across London Cancer. There are three work streams underpinning this agenda:

i. Enhanced infrastructure: there is a recognition that to achieve the step change in access to diagnostics required to improve survival there needs to be a significant expansion in diagnostic infrastructure. A comprehensive analysis of capacity and demand will be
undertaken with partners to determine the scale, modality and geographical site of gaps in infrastructure. Working with partners, UCLH Cancer Collaborative will develop business cases to respond to specific gaps where there is commissioner support to do so.

ii. **Service innovation**: delivering better access to diagnostics will require innovations in how diagnostic services are organised. UCLH Cancer Collaborative will work with partners to test new approaches including straight to test and the Multidisciplinary Diagnostic Centre model. In addition to this we will, through collaboration with world class academics, develop new diagnostic techniques, supporting earlier diagnosis but also driving the realisation of personalised cancer care.

iii. **Workforce**: staffing gaps already present a constraint on diagnostic capacity for many providers in *London Cancer*. UCLH Cancer will work with partners across the sector to develop new training programmes to improve recruitment, retention and to develop enhanced capabilities for staff, as a key enabler to role innovation.

“It’s great to be the first centre in London that is CT screening high-risk patients for lung cancer. From our first 40 patients screened we have detected two early stage lung cancers. The study is funded by CRUK and setting it up has been a huge effort across medicine and radiology. Thanks to everyone involved.”

Professor Samuel Janes

Professor Samuel Janes, Professor of Respiratory Medicine, UCL and UCLH
1.6 Centre for Cancer Outcomes

The Cancer Vanguard set out high level ambitions to develop a Centre for Cancer Outcomes.

This will regularly produce detailed reports of comparative quality metrics for providers in the sector to drive down variability through benchmarking. We have invited the FARR Institute, PHE, NHSE, Macmillan, CRUK and Cambridge University Hospital Foundation Trust to be involved in setting up this centre.
The Centre for Cancer Outcomes will:

- Produce whole system quality metrics, including self-reported outcomes, enabling benchmarking
- Make data available in the best way to motivate clinical teams and improve understanding of the ‘value’ of whole pathways of cancer care and their component
- Provide patients, providers and commissioners with customised insights into the impact and efficacy of different treatment options on a range of outcomes
- Develop enhanced outcome measures which better reflect the things that matter most to patients throughout their pathway and are personalised
- Develop algorithms to stratify and follow up patient cohorts to assess outcomes
- Empower providers to tailor treatment and prevention strategies to individuals’ unique characteristics
- Model future service demands, ensuring optimisation of resources and assets across London Cancer

“UCLH was the first hospital in the UK to develop a teenage cancer unit in 1990. Since then, the TYA service has grown in size, activity and complexity and enjoys international recognition. The UCLH TYA PTC provides world class cancer care in state-of-the-art age appropriate facilities, with the holistic needs of every patient at the forefront of all aspects of care, supported by an expert and extensive multidisciplinary team.”

Dr Rachael Hough, TYA Clinical Lead, Tumour Pathway Board Director and Consultant Haematologist
Strategic Themes

2.1 Research

UCL and UCLH are committed to delivering world class cancer research. In addition to the research conducted at UCL Cancer Institute, we are able to utilise the world class capabilities in engineering, pharmacy, computing and public health to the benefit of our cancer research programmes. These strengths are reflected in the international rankings for university research, placing UCL in the top five institutions in the world*.

Few other cancer centres benefit from comparable breadth and depth across academic disciplines.

* Ref: UCL is the top rated university in the UK for research strength in the 2014 Research Excellence Framework and has the greatest amount of 4* (world leading) research covering medicine and biological sciences, much of which is conducted in collaboration with UCLH.

* 2014/15 QS World University Rankings
Our infrastructure is comprehensive and ensures delivery across the complete research pipeline. This includes:

- **UCLH-UCL NIHR Biomedical Research Centre**: The BRC supports experimental medicine research at UCLH and UCL. It does this by investing in staff, equipment, facilities and training. The aim is to turn innovations in basic science into treatments and therapies that have a direct effect on patients.

- **NIHR/Wellcome UCLH Clinical Research Facility (Early Phase Trials Unit)**: The CRF is a purpose built environment dedicated to experimental medicine and clinical research. The mission of the CRF is to facilitate the translation of basic science knowledge into improved patient care through new diagnostics and therapies.

“...The early phase haematology trials program provides patients access to cutting edge novel therapeutics across a range of tumour sub-types. This includes first-in-human immunotherapies as well as a number of academic studies developed from partnerships with academics at the UCL Cancer Institute, fulfilling our bench-to-bedside and back again strategy.”

Dr Rakesh Popat
The Cancer Division is fortunate to host a dedicated team to support clinical research in the clinic, ranging from phase II cTIMP studies through applied health research and observational studies. The Cancer Clinical Trials Unit with over 70 staff fully evaluates feasibility of running all trials and supports every aspect of trial conduct through activation to closure. Internal programmes for audit, governance and performance management are all mature, ensuring efficient and effective trial activity.

Professor Jeremy Whelan, Professor of Cancer Medicine, Consultant Medical Oncologist and CCTU Clinical Lead

- **NIHR Experimental Cancer Medicine Centre:** provides resources and infrastructure for drug development, early phase clinical trials, molecular pathology and diagnostics.

- **CRUK and UCL Cancer Clinical Trials Centre:** one of the largest cancer trials centres in the UK with approximately 100 staff and one of the nine accredited clinical trials units of the National Cancer Research Institute. The CTC coordinates national and international cancer trials with an increasing emphasis on early phase trials and trials with Advanced Therapy Medicinal Products.

- **CRUK Cancer Imaging Centre:** is a focal point for world-class research using a variety of imaging techniques, such as magnetic resonance imaging (MRI) and PET (Positron Emission Tomography).

- **CRUK Centre Status:** part of a world-class network for the translation of cancer research for patient benefit, focussing on new treatments such as gene therapy, health behaviours and drug discovery.

- **CRUK Lung Cancer Centre of Excellence (with Manchester):** brings together the unique and complementary

“...
strengths of our partner organisations to create a collaborative environment in which integrated lung cancer research can flourish. Home to pioneering studies into cancer cell biology, cutting edge drug discovery laboratories and world leading researchers investigating novel approaches to the detection, monitoring and treatment of lung cancer, the Centre’s vision is to ultimately improve outcomes for cancer patients.

- **Lymphoma and Leukaemia Research Centre of Excellence:** supporting world-class research into all the main blood cancers – leukaemia, lymphoma and myeloma. UCL researchers are exploring how to harness the immune system to fight blood cancer.

- **Sarah Cannon Research Institute partnership:** the strategic partnership between UCLH-UCL and the SCRI provides a unique dimension to our experimental medicine agenda including offering patients access to a substantial portfolio of early phase clinical trials.

- **UCLH Cancer Clinical Trials Unit:** with over 70 staff providing expertise in research
nursing, trial practitioners and data management, the CCTU is the delivery engine for clinical trials across haematology and cancer services.

- **Bill Lyons Informatics Centre**: part of the UCL Cancer Institute, provides a hub of bioinformatics expertise for cancer genomics.

### Major achievements include:

- **Immunotherapy**: Syncona start up Autolus for CAR-T therapies; CRUK Accelerator; Wellcome Strategic Award; CRUK National Centre Status; NIHR Blood and Transplant research unit for stem cell transplantation and cancer immunotherapy based at UCL.

- **Molecular Pathology**: MRC Single Cell Facility; E Med Lab; UCL-AD.

- **Energy and Imaging**: CABI; Charles Bell House Image Directed Therapy; MR Theraonomic Platform; UK’s first clinical PET-MR.

- **Early phase clinical trials**: During the last year the CRUK-UCL CTC has generated new grant income of £4.1m, has 25 new trials open or in setup and published 31 papers related to clinical trials. During 2014/15 the CRF recruited 109 patients into early phase (I & II) trials.

Over the next five years we will exploit the synergy between the BRC, CRF, CRUK Centre and AHSC to realise research benefit for patients across *London Cancer*. The BRC renewal and CRUK Major Centre status are key priorities and are underpinned by investing in enhanced capabilities and infrastructure which includes:

- Recognising and rewarding talent within UCLH and UCL.

- High calibre appointments to augment existing talent,

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“**The new NIHR Blood and Transfusion research unit for stem cells and immunotherapy (in collaboration with NHS Blood transfusion) provides a fantastic opportunity to translate clinical meaningful novel therapies into the clinic.**”

**Professor Karl Peggs**
including a new Chair in Radiation Oncology.

- Collaboration across UCL Partners in genomic medicine.

- Enhancing health informatics and bioinformatics capacity and capability aligned to patient and population health benefit.

- Leading and collaborating across immunological, cellular and gene therapy programmes, surgical trials and tissue engineering research and advanced cancer imaging.

- Forming a new strategic relationship in early phase trials with SCRI.

- Collaborating with the CRICK to inform world leading research in basic science and translating discovery into patient benefit.

Establishing a new Institute for Cancer Precision Medicine will harness expertise and resource to realise our full potential in many of these priority areas. Future therapies will be delivered by precision cancer medicine – a treatment package that is specific to the individual and which applies our whole suite of tools to the understanding and treatment of patients’ own unique cancer. It is our vision that, within five years, every patient will have their own personalised cancer pathway, from early diagnosis and screening, to imaging or biopsy, to genomic analysis of their cancer, through to state-of-the-art clinical trials.
2.2 Patient Experience

Ensuring that patients have the best experience possible throughout their journey is a strategic priority for UCLH Cancer Collaborative. Achieving this requires an understanding of the complexity of patient pathways and the resulting specific needs, of which UCLH is often only a part. Improving patient experience means working effectively across organisational boundaries - primary care, secondary care, social care and tertiary care - to avoid what patients too frequently experience - a fragmented and poorly coordinated service.

“There are two key areas of focus to improve patient experience. The first is the development of communication skills training to ensure all staff have access to training to develop skills to communicate well with each other and with patients and families. The second is the development of the clinical nurse specialist workforce to ensure all patients have access to a specialist nurse who has excellent clinical and support skills, and is able to assess their needs effectively and holistically.”

Alison Hill
UCLH has demonstrated a consistent improvement in our cancer patient experience over recent years, measured by the National Cancer Patient Experience Survey (NCPES). Nonetheless, there remains significant scope for improvement. The feedback across London Cancer indicates that six out of the ten poorest performing hospitals in the 2014 NCPES are within our integrated cancer system. There is a collective responsibility to respond to this feedback as a system.

**Within services at UCLH there are three priority areas to improve patient experience:**

- Waiting times in the University College Hospital Macmillan Cancer Centre.
- Communication within and between clinical teams.
- Communication with patients and their families.

“Supportive care in cancer is defined as the prevention and management of the adverse effects of cancer and its treatment. This includes management of physical and psychosocial symptoms and side effects from diagnosis through treatment to post-treatment care and survivorship. The supportive care services we offer provide psychological, social and practical support underpinned by a programme of supportive self-management which aims to rebuild confidence and a sense of well-being through structured workshops, courses and innovative models of support and education.”

Hilary Plant and Lallita Carballo
Our objectives to improve patient experience are:

1. **Deliver the best patient experience within UCLH - waits and access.**
   - Reduce waiting times in the University College Hospital Macmilan Cancer Centre and along pathways making best use of one stop models and self-managed follow up.
   - Improve the experience for patients whilst they are waiting.
   - Improve access to therapies, supportive care services provided by the Macmillan Support and Information Service and CNS services.
   - Develop innovative consultations around patient needs (e.g. SKYPE, evening clinics etc).

2. **Deliver the best patient experience within UCLH - communication.**
   - Improve communication with patients receiving care at UCLH making using a range of tools, including the patient portal and self-management programmes.
   - Improve communication between professionals horizontally and vertically along the patient pathway and within multidisciplinary teams at UCLH.

3. **Deliver the best patient experience within UCLH living with and beyond cancer.**
   - Understand and respond more effectively to patients’ holistic needs.
   - Ensure supportive cancer care and rehabilitation services are integrated into the patient’s pathway of care.
   - Improve patient experience at the end of life, empowering patients, families and carers.

The Creative Specialist aims to provide a safe space during which patients and carers have a focus away from the impact of their cancer and treatment.

An example is the Snowflakes session held in December 2015.

Photographs of growing ice crystals were used to inspire patients, friends and relatives.
4. **Deliver the best patient experience across pathways.**
   - Share information between GPs and partner hospitals in a timely and secure way.

5. **Develop training and education programme to improve patient experience.**
   - Build on existing patient education programmes ensuring that they are integrated into the patient’s pathway of care.

6. **Engage effectively and consistently with patients, carers, families and the public we serve to inform planning and improvement.**
   - Engage effectively through the Cancer Patient and Public Advisory Group, utilizing their work programme as a framework.
   - Engage with patients through a wide spectrum of activities including patient groups and through a rolling programme of workshops.

“As an independent member of the group, I draw on my experience of cancer services to provide an external perspective to their provision at UCLH. The CPPAG work programme provides a clear plan of action which is agreed with UCLH and is measurable over time whilst being flexible to adapt to the changing needs and priorities.”

Lorraine Hart, Co-Chair of the Cancer Patient Public Advisory Group
2.3 Patient Outcomes

**UCLH Cancer has an exceptionally strong track record in patient outcomes.** Highlights include:

- **Hospital mortality:** UCLH consistently achieves one of the best hospital mortality rates across the NHS.

- In 2009 and 2011 Dr Foster designated UCLH the UK’s top hospital, achieving a mortality rate 30 per cent better than the UK average.

- **BMT survival:** the most recent survival data from the British Society of Bone Marrow Transplantation shows UCLH performing statistically better than the national average.

- **Teenage and young adult cancer care (TYA):** this service has achieved significant increases in trial recruitment and improved survival in adolescent acute lymphoblastic leukaemia. It is also the top rated service nationally according to peer review.

These successes overlook two significant dimensions beyond patient survival at UCLH. First, there is a significant disparity in survival and other outcomes measures across the London Cancer region. Second, there is a broad spectrum of outcomes.

“Merging the Royal Free haem-oncology unit with UCLH was a massive undertaking but now makes us the largest haemato-oncology unit in Europe and gives an unrivalled opportunity to create teams of highly sub-specialised clinicians providing specialist care for their patients 24/7.”

**Dr Kirsty Thomson, Consultant Haematologist**
that matter to patients across the entirety of their journey as a patient from the onset of symptoms to living with and beyond cancer.

Emergency Presentation

- Barking and Dagenham (29.2%) has the highest percentage of emergency presentations for cancer diagnosis in London Cancer; Camden (19.9%) has the lowest percentage.

- Research shows one in four cancers in England are diagnosed via an emergency admission, rather than through another clinical pathway such as screening or GP referral. This rises to half of all cases of pancreatic cancer and almost two-thirds of brain or central nervous system cancer, and increases with age for all cancer types.
GP Diagnosis

• Three in four (73%) people with cancer diagnosed via their GP are referred for investigations after only seeing their GP once or twice, some people have five or more appointments before being referred.¹

One study reported a six-fold variation in GPs’ individual referral practices.²

Sector outcomes

There is a ten percentage point variation in one year survival between the best (Barnet) and worst (Dagenham) performing CCGs in the London Cancer region, with all CCGs in North East London below the England average. As the system leader it is not acceptable for UCLH to overlook this disparity - UCLH Cancer Collaborative is committed to working with partners to lead a radical improvement in patient outcomes across all CCGs in London Cancer, especially those CCGs where patient outcomes are amongst the worst in Europe.


Defining outcomes beyond survival

Survival is, and will always be, an outcome which is paramount for most patients. Nonetheless, focusing on survival alone neglects quality of life aspects such as mental health, physical wellbeing and the patient’s experience of healthcare services along their pathway from diagnosis to living with and beyond cancer. UCLH Cancer Collaborative will work with a wide range of stakeholders to develop more complete indicators for all cancers to better inform providers, commissioners and policymakers. The ability for patients to work with their healthcare teams to tailor desired outcomes and monitor progress in real time will be an important deliverable.

Our objectives to improve patient outcomes are:

1. **Develop shorter and better patient pathways.**
   - Map pathways with clear timelines for appointments, diagnostics, decisions and treatments, including direct patient navigation for the most complex patient pathways.
   - Identify and embed best clinical practice into patient pathways, such as application of one stop models and stratified follow up.
   - Work with referring centres to ensure seamless pathways between organisations.
   - Improve the range and quality of services, including access to expert advice, available at the weekend.
   - Ensure sufficient capacity exists to support growth and timely patient care.
• Ensure all patients and relatives receive best care during any advanced, life threatening illness, including the last days of life.

• Embed therapies and supportive cancer care within every tumour pathway.

• Ensure that living with and beyond cancer is embedded within all cancer pathways.

2. **Record, report and use outcomes information.**

• Establish a cancer clinical information system at MDT level which is fit for purpose.

• Establish a robust operational model to support capture and reporting of outcomes information.

• Ensure that outcomes information is recorded and is quality assured.

• Publish outcomes information and make it available to patients, the public and commissioners in a way that can be understood.

• Proactively inform the design and development of the UCLH EHRS to ensure it is fit for purpose.

• Embed patient outcome information within MDT balanced scorecards to drive improvement and provide assurance.

“**The strong partnership between UCLH and Macmillan Cancer Support brings together two exemplary organisations with the shared ambition to improve the care and experiences of those affected by cancer. Our innovative programme makes this partnership a springboard not just for excellent cancer treatment and experience at UCLH, but also acts as an inspiration for other NHS and Macmillan organisations across the UK.**”

*Nikki Cannon*
3. Develop interoperability between multiple health data sets to answer important research questions.

- With partners, establish a nationally reputable centre for cancer outcomes.
- Ensure delivery of 100k Genomes work and development of genomic based diagnostics.

4. Impact prevention and public health

- Develop the case for enhanced diagnostic infrastructure in London Cancer.

- Explore how UCLH can contribute to prevention through its leading role for cancer in the 100k Genomes work.
- Use the Centre for Cancer Outcomes to inform the public health agenda and strengthen public engagement and awareness.
- Inform the design of other clinical pathways to support public health interventions (such as smoking cessation or screening uptake).
5. **Deliver service innovations to provide world class outcomes for cancer patients in a financially sustainable way**


- Progress case for centralising specific elements of other cancer pathways, dependent on evidence base and commissioner support.

- Develop innovative service models in diagnostics, radiotherapy and chemotherapy to provide high quality cancer care across a broader geography and closer to patients’ homes.

- Implement major capital programmes including: PBT, Phase IV, Phase V and Linac replacement.

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“The UCLH neuro-oncology MDT is world-class expertise working together to provide and co-ordinate the best care for patients with brain tumours. We are comfortable with expressing divergent views, creating a forum for discussion that is educational as well as clinical decision-making. We ensure an advocate for every patient is present and heard. The excellent functioning of our MDT is why UCLH has the highest UK patient recruitment into international clinical trials for high grade brain tumours.”

**Dr Naomi Fersht**

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- Develop leading edge capabilities in surgical techniques and infrastructure.

- Progress the integration of cancer surgery to support improvements in patient outcomes.
2.4 Workforce

At UCLH Cancer Collaborative we have an extraordinary breadth and depth of talent across many disciplines, service areas and tumour specialties.

Recent highlights include:

- Launching a new team of advanced nurse practitioners to work alongside the medical workforce in providing inpatient haematology care.

- Securing new consultant clinical academic appointments in Haemato-Oncology, Uro-Oncology, Breast Oncology and Gynae Oncology, each bringing expertise in early phase clinical trials.

- Securing additional consultant appointments to enhance scale and sub specialisation in Acute Oncology, Breast Oncology, Lung Oncology, GI Oncology, Sarcoma, Thyroid and Haemato-oncology and Haemato-pathology.

Cancer is increasingly both a long-term condition as well as the UK’s major cause of mortality. These factors contribute to pressures that staff experience, particularly where staffing resource is scarce. Workforce innovation will be essential to manage changing patient needs and structural shortfalls in key professional groups. It is also essential that we build on what already exists to do more to support staff through training, mentoring, clinical supervision and other interventions which can build resilience. Staff tell us that the single biggest determinant of their satisfaction at work is how well services are designed, resourced and run. There is a clear synergy between delivering services in a way that is satisfying for patients, and the impact this will have on staff wellbeing; the converse is also true.
Our objectives for developing and supporting our workforce are:

1. **Optimise the current cancer workforce at UCLH.**
   - Ensure appraisal and objectives in place for all staff; challenge poor performance.
   - Develop a clear strategy of communication skills training for all patient facing staff.
   - Support for staff (eg Community of Cancer CNSs, Clinical supervision, Schwartz rounds).
   - Regular workforce review as part of the annual business planning cycle.
   - Develop recruitment and retention strategies, particularly for hard to recruit groups, thereby addressing the deficit in staffing numbers that exists in some parts of the cancer workforce.
Kevin Sullivan, UCLH Radiotherapy Services Manager

“My aim is to ensure that the best technologies and techniques are available to our patients. Using state of the art linear accelerators as well as developing a national proton beam therapy service. At the heart of delivering the best treatment techniques is ensuring that our patients' holistic needs are also provided for.”

Kevin Sullivan

2. Prepare for the future needs of the service at UCLH and beyond.

- Explore scope for more pathway working to support London Cancer changes (to exclude extension of MDT team building work) and improved cancer care across the sector.
- Workforce/role innovation – 7 day working, expanded responsibilities for different staff group.
- Develop workforce to meet needs of a radiotherapy service which includes PBT.
- Prepare for Phase IV and Phase V developments.
- Horizon scanning for service changes (UCLH, sector, NHS-wide, technological) and plan for changing workforce requirements.
“Our large nursing workforce is simply critical to our aspirations to provide leading cancer services and outcomes. It’s a given that our nursing staff at all levels need to be compassionate and caring individuals. To ensure high quality care and patient safety it is equally important that they are highly trained and expert in a range of technical clinical skills and cancer care competencies. A number of the services we provide are solely nurse-led and at the cutting edge of cancer care - like our apherises service providing a round the clock on-call emergency service to patients nationally and our central venous access team.”

**Stephen Rowley**

- Develop workforce to meet surgical needs of high complexity, high quality care.

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**3. Develop education and training opportunities for the wider cancer community.**

- Share knowledge and expertise to improve outcomes and experience across the cancer community.

- Income generation for the service at UCLH to further support training and education of our staff, with benefit aligned to those who input.

**Stephen Rowley, Senior Divisional Nurse, Cancer Division UCLH**
Enablers

3.1 Capital Investment

Together UCLH and UCL have the most ambitious programme for capital investment for cancer care in the UK. The five year capital investment plan underpinning the development of cancer care at UCLH totals over £730m. Our vision is that this investment will place UCLH amongst international peers in cancer care as the cancer campus on Huntley Street is established between UCLH and UCL alongside our charitable and commercial partners. Highlights include:
• Proton Beam Therapy (becoming the UK centre for PBT in partnership with The Christie).

• Phase IV (including PBT, Cancer Surgery, Imaging, Specialist ICU and 135 Haematology beds).

• Phase V (providing care for patients with oral and head and neck cancers).

• Queen Square development (building capacity for brain and spinal tumour services).

• Investment in leading edge Radiotherapy technology (consolidating our position as the UK’s largest provider of paediatric radiotherapy, improving clinical outcomes and efficiency).

This builds on the platform of investment over recent years which includes the Paul O’Gorman UCL Cancer Institute and University College Hospital Macmillan Cancer Centre.

3.2 ICT

Cancer services rely on complex pathways between many organisations. Unfortunately IT systems have until now, been built from the perspective of organisations as silos. This leads to three problems:

• Pathways: Inability to automatically track and transfer of patients across the system.

“Our aim is to provide world-class integrated services for patients with blood cancer. We will develop clinical models that ensure we make diagnoses as early as possible and that we increase access to the most up-to-date and innovative treatments. By working with patients, we will design services that are less institution-based and more focused on the needs of patients and their families.”

Professor Ronjon Chakraverty
• **Lag time:** Clinical information is not readily available across the network in real time.

• **Improvement:** Collection of data for secondary use such as for audit and research is not simple or standardized.

Our vision in cancer is of a citizen-centric cross-site integrated IT platform to enable real-time sharing of clinical and pathway information, where data is easy to enter and simple to extract. This solution should have a single standardised data model; be built on modern and open standards; be scalable, flexible, sustainable, and therefore future-proofed to cope with new models of care.

Our mission is to develop IT solutions to enable world-class cancer outcomes and services, in line with all providers’ cancer strategies. We believe the systems we develop will need to fit with key principles:

“**The Proton Therapy Service here at UCLH will have one of the most complex caseloads of any proton service in the world. Therefore it is of paramount importance that outcome data including long term effects and quality of life metrics are collected comprehensively on all patients from the inception of our service.”**

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**Dr Yen Ching Chang**

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• A citizen-centric cross-site integrated cancer record, to enable real-time sharing of clinical and pathway information.

• Supports the direct clinical management of the patient, rather than add to the workload of the clinical team (where data is easy to enter,
relevant to direct patient care, and simple to extract).

- Interoperable by design with open interfaces.

- Stores clinical information in a way that interacts with the different IT systems across partner hospitals to facilitate a lifetime record.

- Based on clinically agreed and governed open data models to ensure semantic interoperability.

- Flexible, modular, scalable and sustainable.

- Supports delivery of National Information Board recommendations and targets.

- We will work with all partners across the system through the Vanguard governance structure to develop the best options to solve the three problems within the principles above.

3.3 Pathway Improvement

*London Cancer* has been a driver for significant pathway improvements which have been clinically led. The reconfiguration of complex cancer care in six pathways has been a noteworthy success which is unparalleled elsewhere in the NHS, encompassing:

- **Haemato-Oncology:** centralising complex haematological cancer care from RFL to create the UK’s largest centre for Haemato-Oncology at UCLH. 1,800 patients will have their care transferred to UCLH as a result of this development.

- **Urology:** centralising robotic prostate surgery pathways across *London Cancer* to UCLH, providing leading edge care to a further 119 patients per year.
• Head and Neck: centralising complex surgical pathways across London Cancer to UCLH, benefiting an estimated 257 patients per year.

• Neuro Oncology: centralising complex surgery to BHRUT and UCLH, with 61 new patients receiving their care at UCLH following this reconfiguration.

• Oesophagogastric: centralising complex surgery for an estimated 50 patients per year to UCLH.

• Renal cancer: creating Europe’s largest centre for renal cancer at the Royal Free London by consolidating activity across London Cancer.

The London Cancer Tumour Pathway Boards have systematically defined best practice pathways for every tumour type. Looking to the future we will build on this work, engaging with providers and commissioners to implement these best practice pathways and reduce variation in access, quality and outcomes across the system. We will also work on stretching pathways to ensure that we address both prevention and population health as well as the living with and beyond cancer parts of cancer pathways.

“The strength of the Tumour Pathway Boards lies in the representation from patients and a wide range of health care professionals from all round the London Cancer ICS to improve patient pathways and outcomes.”

Professor Muntzer Mughal, UCLH GI Surgeon, London Cancer OG Tumour Pathway Board Director
3.4 Operational Model

System Leadership

UCLH is recognised as the system leader for London Cancer. This builds on our role as the Academic Medical Centre for Cancer in UCLPartners. We have worked with stakeholders across the system to develop the definition of what system leadership means.

Patients and staff are at the heart of our approach. This philosophy is best articulated in the Cancer Vanguard work that UCLH has led on behalf of the London Cancer system which culminated in successful designation as a Cancer Vanguard alongside systems led by the Royal Marsden and Christie Hospitals.

As a system leader we are committed to working closely with colleagues in commissioning to inform and co-design approaches that support improved outcomes and experience for patients.

Organisational Design

As a system leader we are exploring innovations in organisational design to best enable the provision of cancer care across the sector. Organisational design is relevant at two levels: first, we are concerned with developing optimal organisational types that enable partners to harness their collective potential. Examples include joint ventures and service franchising in specific service areas. The second area we are working on is the development of optimal operational service models in specific areas, such as chemotherapy and radiotherapy. These efforts focus on developing best practice workforce models and standard operating procedures. The
UCLH Cancer strategy 2015-2020

System leadership

Public
Private and Charitable
Government and Commissioners
Sector Providers
UCLH Cancer Services

Staff and Patients

Inform Policy
Cancer Academy
Outcomes Centre
ICT Strategy
Research and Development
Specialist Care
Define Pathways and Standards
Service Innovation

UCLH
guiding philosophy in developing organisational form is that it should:

i. Follow the function it needs to provide.

ii. Enable local provision.

iii. Optimise benefits realisation - finance, quality, staff & patient experience.


Empowering Tumour Pathway Teams

A central pillar of developing and delivering our strategy is the role of tumour specific multidisciplinary teams. These teams constitute Integrated Practice Units (HBR, October 2013) that best align our organisational building blocks with the pathways that patients experience. Key aspects of this approach include:

i. Business planning at tumour pathway level.

ii. Development of balanced scorecards for all tumour pathways.

iii. Providing management support to tumour pathway teams to develop and deliver the objectives which they have prioritised.

iv. Ensure that the leads for each tumour pathway have protected time to meet regularly to coordinate.

“We have many inspirational leaders across our cancer pathways. Their dedication and expertise provides the backbone to our cancer strategy. Without them our vision to become a world class cancer centre would lack definition and credibility. Together, we can work with partners across London Cancer to effect huge benefits for patients.”

Nick Kirby
Features

University College Hospital Cancer Fund

The University College Hospital Cancer Fund, created in April 2014, supports all cancer patients and their families at UCLH by funding a number of services over and above what the NHS offers. Through philanthropic giving, the UCH Cancer Fund is helping UCLH change how London, and indeed the world, treats – and thinks about – cancer and support for those undergoing treatment from defusing the fear surrounding cancer by investing in our support services for patients to improving treatments and better outcomes by funding new equipment and research projects.
For more information, please visit www.uchcancerfund.org.uk or contact Nick Gilbert, Head of Fundraising on 0203 447 1884 or email nick.gilbert@uclh.nhs.uk.

**Haematology Cancer Care**

Haematology Cancer Care (HCC) brings together haematology patients, families, supporters and staff to raise funds for the UCLH Haematology Service through a calendar of social and supportive events.

This HCC charity fund helps improve the outcome and treatment experience for haematology patients and families in the UCLH inpatient wards, Cancer Centre and Ambulatory Care settings. It achieves this by supporting the NHS to fund and provide state of the art medical equipment such as apheresis treatment machines, innovative new clinical roles, important post graduate haematology nursing training and a range of complementary therapies for patients and families and staff. The HCC is directed by clinical staff ensuring responsive supportive charity based care to our haematology patients.

For our current Wish List or to get in touch please visit: www.uclh.nhs.uk/HCC

**The University College Hospital Macmillan Cancer Centre**

The Cancer Centre welcomed its first patients in April 2012. It is now a busy centre providing facilities for the diagnosis and treatment of a wide range of cancer and non-cancer conditions alongside support and information services for patients, their carers and families.

The vision for the Cancer Centre was conceived following visits to some of the world’s leading facilities for the treatment of
cancer, particularly in the United States. The benefits of co-locating as much as possible of the cancer patient pathway under one roof were noted, as was the shift to increasingly provide cancer treatment in the outpatient and daycare settings. This led to the development of plans for an ambulatory facility dedicated to the whole cancer patient pathway, along with a small number of non-cancer specialties.

The Cancer Centre has a wide range of facilities:

- **Diagnostics:** Phlebotomy, Imaging (CT, MRI, X-ray, Ultrasound), Nuclear Medicine, Mammogram, Nasoendoscopy, Breast Ultrasound and biopsy.

- **Consultation space:** Outpatient rooms across three floors

- **Treatment:** Cancer Ambulatory care, Chemotherapy daycare, Supportive care and Apheresis daycare, Teenage and Young Adult daycare, Dental facilities, a daycase theatre and procedure room.

- **Support and Information services:** Living room, group therapy rooms for peer support, creative therapy and exercise and relaxation, dedicated suite of private rooms for psychological support, practical advice and complementary therapies.

- **Support services:** Pharmacy dispensary, aseptic pharmacy for the production of chemotherapy, café, shop and roof garden.
• The building has given these services an appropriate home and brought much of the cancer patient pathway under one roof enabling the service to grow. It now hosts around 90,000 outpatient attendances and over 35,000 daycase treatments each year.

• The building has won a number of awards for its design and environmental credentials and on the whole gets excellent feedback from patients. Feedback on the staff in the Centre is almost universally positive. However the building is not without its challenges as the complexity and level of demand have grown significantly since the Centre opened. We continue to work to improve our pathways and our processes and ensure the delivery of world class cancer care in this world class facility.

Macmillan Support and Information Service

• The Macmillan Support and Information Service opened with the Cancer Centre in April 2012. The vision is to meet the needs of patients their families and friends by providing access to individualised, supportive cancer care which is integrated with the experience of treatment and follow up. With the right support and information most people can cope with a cancer diagnosis and are able to better manage their day to day lives. Here, through experienced trained staff and volunteers providing a ‘drop in’ service, programme of support and services such as psychology and counselling, complementary therapies and welfare and benefits advice our goal is that everyone has access to the care, information and practical support that they need.
### UCLH Cancer Strategy 2015-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2012</td>
<td>April 2012: UCH Macmillan Cancer Centre opens.</td>
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<td>July 2012: Cotton Rooms Open</td>
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<td>2013</td>
<td>Summer 2013: London Cancer bidding process for specialist cancer care</td>
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<tr>
<td>2014</td>
<td>July 2014: Commissioners approve centralisation of specialist cancer</td>
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<td>August 2014: UCLH Cancer Programme launched</td>
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<td>September 2014: Cancer Unification Board launched and GPs join CCSG</td>
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<tr>
<td></td>
<td>December 2014: UCL ranked first nationally in REF</td>
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<td></td>
<td>2014: UCL prioritise future investment in second Cancer Institute</td>
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</tbody>
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### Cancer System

- April 2012: UCL - UCLH Biomedical Research Centre - second five year award
- September 2014: Cancer Unification Board launched and GPs join CCSG

### Cancer Research

- April 2012: UCL - UCLH Biomedical Research Centre - second five year award
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<table>
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<tr>
<th>2015</th>
<th>2016</th>
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<tr>
<td><strong>January 2015</strong>&lt;br&gt;UCL Partners designated Regional Genomics Centre</td>
<td><strong>2016</strong>&lt;br&gt;Expansion of Multi Disciplinary Diagnostics Centre</td>
<td><strong>2017</strong>&lt;br&gt;Neuro-Oncology transfer completes</td>
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<td><strong>January 2015</strong>&lt;br&gt;ULCH Board approves phase IV business case</td>
<td><strong>2016</strong>&lt;br&gt;Launch Cancer Academy</td>
<td><strong>2018</strong>&lt;br&gt;Phase V opens</td>
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<td><strong>March 2015</strong>&lt;br&gt;Government approves Proton Beam Therapy</td>
<td><strong>2016</strong>&lt;br&gt;Launch Centre for Cancer Outcomes</td>
<td><strong>2019</strong>&lt;br&gt;Phase IV opens</td>
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<td><strong>December 2015</strong>&lt;br&gt;OG, Head &amp; Neck Urology and Haem-Onc transfers complete</td>
<td><strong>2016</strong>&lt;br&gt;First collaborative model of radiotherapy operational</td>
<td><strong>2017</strong>&lt;br&gt;New model for Integrated Cancer Diagnostics fully operational</td>
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<td><strong>February 2015</strong>&lt;br&gt;Submission of UCLH Vanguard proposal</td>
<td><strong>2016</strong>&lt;br&gt;Appoint Chair in Radiation Oncology</td>
<td><strong>2019</strong>&lt;br&gt;UCL Cancer Precision Medicine Centre opens</td>
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<td></td>
<td><strong>2016</strong>&lt;br&gt;Launch bid for CRUK Major Centre Status</td>
<td><strong>2017</strong>&lt;br&gt;UCL - UCLH Biomedical Research Centre renewal</td>
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UCLH Cancer Strategy 2015-2020

Complete Cancer Care