Cancer care after the pandemic – using the independent sector to help clear the backlog

A discussion paper from Rutherford Health for the APPG *May 2021*

During 2020 the NHS and the independent healthcare sector co-operated to dramatically increase the national capacity for all patients requiring hospitalisation for COVID 19, especially those with respiratory failure. During this period, the number of people diagnosed with cancer fell precipitously.

In the month of April 2020, we would have expected around 30,000 new cancer patients in the UK. But the positive biopsy rate is expected to be less than 10% of that expected. Other relevant metrics also show a huge reduction including the number of new consultant referrals of all types – two week wait, urgent (six weeks) and routine (3 months); the endoscopy rate, and the uptake of CT, MRI and PET-CT scans. New patient flow to cancer services for chemotherapy, immunotherapy and radiotherapy was reduced to a trickle. Although there has been a return to a near normal incidence the problems anticipated now are:

- A continued delay in the diagnostic pathways for cancer leading to significant upward stage migration of many solid tumours.
- Persisting difficulties in scheduling primary surgical intervention especially for chest and abdominal surgery requiring complex excision procedures only possible under general anaesthesia.
- These delays will now inevitably cause upward stage migration in many patients so reducing overall 5-year survival significantly in many patients. Similar prognostic figures apply to most solid tumours. The timing of this upstaging is very variable and depends on both tumour and host factors. Delays in the diagnosis and treatment of cancer is the commonest cause for litigation. It is accepted that where there is breach of duty a delay of 6 months or more is adequate proof of causation in claims for compensation.
- The upstaging means that primary cancers usually confined to single organs are more likely to spread to lymph nodes and other structures. Effective treatment will require more complex surgery and require more medical intervention – chemotherapy, immunotherapy and radiotherapy to achieve optimal outcome.
- The timing and severity of this wave of new patients critically depends on the speed at which diagnostic services and cancer surgery can get back into full operation. The longer the delay, the bigger the surge. The strategy of creating 19 cancer hubs utilising the resources of the private sector kick started surgery for the NHS effectively.
- There may be inadequate staff capacity to treat all patients optimally during the peak months of cancer presentation following any backlog. We will need to take carefully considered short cuts such as fewer radiotherapy fractions, the use of oral

chemotherapy to substitute for parenteral drugs and the use of regimens with fewer hospital visits.
- There will be serious emotional difficulties for cancer patients and their families who will have to be informed of the effects of delay and the possible consequences on their long-term survival.

Strategies to reduce complexity and duration of treatment

Protocols are being developed to reduce the complexity of all three cancer interventions to utilise current capacity. These include:

- Prioritising patients based the ability of treatment to produce the most significant health gain.
- Using local anaesthesia procedures such as spinal block to reduce the need for intubation and possible ICU use postoperatively.
- Replacing surgery as primary treatment with radical radiotherapy delivered by precision techniques such as SABR (Stereotactic Ablative Radiotherapy) and Proton Beam Therapy using very low numbers of treatment fractions but with considerably increased accuracy. This would obviate the need for hospital admission for many.
- Significantly reducing the total number of radiotherapy fractions used and so the number of patients visiting our radiotherapy services. There is now good clinical trial data in a randomised control setting that 5 fractions is not inferior to 15, 20 or even 37 fractions in both breast and prostate cancer. The drift towards hypofractionation now needs to be implemented urgently.
- Simplifying chemotherapy protocols to reduce hospital visits and by the substitution of oral agents rather than parenteral where safe to do so. The use of capecitabine orally instead of 5 fluorouracil in adjuvant protocols for breast and colon cancer will considerably reduce workload factors without affecting outcomes.
- Following up patients by telephone and Skype to reduce hospital visits
- Coordinate the use of independent sector capacity in both radiotherapy and chemotherapy during to deal with the inevitable surge in demand as the diagnostic and surgical pathways open.

Surgery and diagnostics

The currently operational 19 cancer hubs partially involve private sector hospitals for surgery and diagnostic biopsies. We assume this phase of activity will be transferred to Covid Free Zones (CFZs) within NHS hospitals by July 2020. This assumes no second wave as predicted by the WHO or virus mutation and the effective use of operating theatres and ICUs.

Radiotherapy

There are 26 private linear accelerators (LINACS) currently staffed and operational. These are in addition to NHS LINACS used part time for private patients. Using traditional load factors of 4 fractions delivered in 1 hour for 10 hours a day for 300 days a year (no Sunday working), gives 12,000 fractions per machine. Traditional fractionation with an average of 20F per course gives a capacity of 600 new patients per year. The safe use of hypo-fractionated regimens for breast and prostate cancer further reduces the mean course duration to 10F so doubling the capacity of each LINAC to 1200 new patients a year.

The private sector therefore has the potential capacity to treat **31,200** new radiotherapy patients annually.

Precision radiotherapy

Radiotherapy can be used as an alternative to surgery under certain circumstances. Lung, pancreatic and prostate cancer are obvious targets for this substitution. Three precision techniques are available in the independent sector.

Stereotactic ablative radiotherapy (SABR)

Low fraction number, high dose precision treatments are regularly used for lung and other cancers. Increasing their availability by harnessing the IS will dramatically enhance overall capacity. The majority of modern LINACS can easily be adapted for SABR once the appropriate software is loaded. Local collaboration to create SABR outposts of NHS centres can be developed within days.

MR LINACS

There are now 4 active MR LINACS in the UK – 2 NHS and 2 IS. This precise form of image guided radiotherapy could be used for selected patients with Stage I and II localised cancers as an alternative to cancer.

Proton beam therapy (PBT)

There are now 4 active PBT centres – Christie, Manchester (NHS) and the Rutherford Centres in Newport South Wales, Reading and Northumbria. 3 more are scheduled to come on stream shortly – UCLH, London (NHS); Liverpool (Rutherford) and Harley St, London (Advanced Oncotherapy).

The use of PBT could be sanctioned by regional coordination teams and patients allocated to the most appropriate and convenient centres. PBT could be used as an alternative to surgery for a range of localised cancers – lung, pancreas, liver, bladder, prostate and sarcomas.

Chemotherapy including immunotherapy and hormone treatment

There is a total of 65 independent chemotherapy unit. Smaller versions (up to 6 couches) are embedded in private general hospitals in the Spire, BMI, Ramsay Hospitals whilst larger areas (10-15 couches) are present in IS cancer centres with associated radiotherapy facilities.

If we assume a conservative estimate of 8 active chairs, treating 3 patients a day 6 days a week, for 6 cycles of chemotherapy over 4-5 months we have the capacity to treat 7,200 cycles of treatment per centre so 200 new patients a year per centre. This gives a total capacity of **130,000** new patients a year.

In addition, there are three home care services Healthcare at Home, BUPA Home Healthcare and Calea Ltd (part of Fresenius) who provide chemotherapy closer to home. Both Healthcare at Home and Bupa run comprehensive home chemotherapy services that included patient registration; prescription, preparation and delivery of cytotoxic drugs; supply of nurses; patient counselling, and telephone support for adverse reactions; and

logistics and waste removal for a variety of chemotherapy regimens. The capacity of these services is determined by specialist nurse availability and is relatively small. Our estimate is that with enhanced use there could be capacity to treat a further **10,000** patients a year with these services.

Private provider commitments to existing clients

Private providers will only be able to commit to an NHS partnership model provided it will not impact negatively on their viability once the crisis is over. Two measures will be needed: firstly they will still have to allocate part of their capacity to treat private patients throughout and secondly they will need the assurance that the links with the NHS, to assist with unmet need, can endure after the crisis.

Private patients with cancer will also deteriorate if not treated in acceptable timelines. Whilst the proportion of self-pay patients may reduce if they are not seeing an shorter treatment time advantage, those who have arranged their cover through insurance will continue to expect treatment at private facilities and the providers may have contractual obligations to deliver it. Such patients will need to be considered as part of the overall UK caseload but just a sub-set that the state will not have to fund.

Integrating public and private providers

Prioritisation and allocation system: local guidelines will need to be created to inform Trusts of the most suitable types of patients for referral under this scheme. A decision will have to be made as to whether consultants can directly refer patients to a provider or whether the allocation is to be managed centrally to allow transparency, oversight, and prioritisation. A regional decision-making group will be needed.

Geographical location: with a few exceptions, private provision is mainly situated in the south of England. Regions without local provision will need to able to go through a clearing house to find a treatment place for a patient. That may require long distance travel and accommodation will need to be arranged.

*NHS Framework Contracts***:** this plan envisages trusts referring patients to providers that they are unlikely to have a contract in place with. A non-volume based simplified procedure to allow trusts to commission care with the provider will be required.

Practicing privileges: consultants employed by the NHS will need to be granted practising privileges in their local IS centres. This should be made as simple a process as possible using documentation already held by NHS HR departments.

IT infrastructure: Most private providers have built their IT infrastructure to integrate and work with the NHS. The UK requires strict security protocols from CES + (cyber essentials scheme (the highest), across to IGSoC (Information Governance Statement of Compliance) and ISO 27001 to allow full NHS integration into the backbone HSCN (Health and social care network, the replacement for N3).All three network providers already combine IEP (image extraction protocol) and direct secure virtual personal network solutions. They are already connected to several NHS Trusts for effective data transfer. With integrated patient treatment systems, the seamless transfer of patient data between organisations is possible. Therefore, specific sections of the treatment pathway can be recorded and verified electronically.

Coordination: a central clearing house will be established to manage this plan, to control the patient flow and to report on activity and issues. This will need clear policy to guide it, robust procedures developed, highly motivated and well-trained staff, reliable IT suited to the task, sound links to all the providers participating and skilled management.

Financial accounting: An agreed equitable tariff will need to be created and monitored. IT will be the key to the accounting process so that there are no delays whilst awaiting central approval. The integration of CCG and national payments, together with suitable financial audit controls will need implementation.

Protecting patients and the system from Covid 19: a key feature of this plan is the ability for the private providers to be able to offer care to immunosuppressed patients in centres that are Covid-19 free zones. Practical measures include:

- The review and assessment of physical entry and exit points to minimise risk to exposure from populated hospital departments and corridors, ensuring that clinics and services treating cancer patients, are exposed to the least amount of risk from infection. Patient treatment must be undertaken in a controlled safe environment, minimising unnecessary exposure to patients who have low immunity. Services must be segregated to protect the most vulnerable.

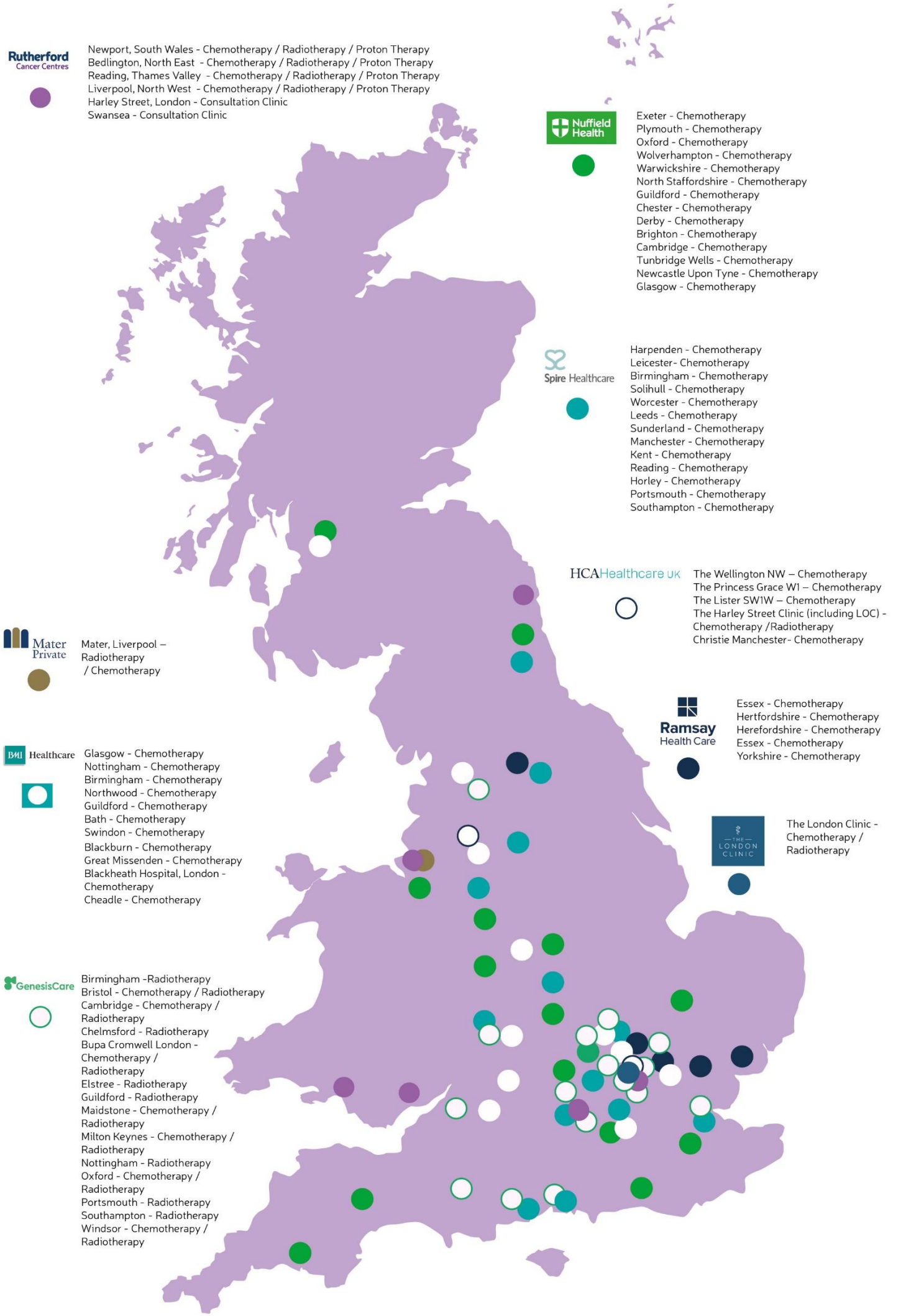
- The commitment by providers to the adoption of a 'first line of defence' approach to the physical locations, through the introduction of Pre-Entry Assessment prior to entering facilities. These assessments risk assess the likely presence of any infection, through temperature checks and brief questioning. Where risks are identified a swift process is implemented to clinically assess the suitability of treatment continuing that day and any necessary additional precautions where treatment can continue. This is a model that has been introduced across all Rutherford Cancer Centres and has proved extremely effective in protecting both the patient attending and patients and staff already in the centres.

- The management of safe staffing by ensuring all staff and consultants undergo the daily Pre-Entry Assessments and strictly adhere to isolation requirements. This must be supported by a networked and flexible workforce to ensure treatments can continue without interruption whilst still adhering to safe practices.

- Adherence and adoption to strict PPE requirements in line with government directives

Conclusion

The expected surge of cancer patients is expected by late summer 2021. The IS has huge resources to assist the NHS by working in partnership. Developing a plan centrally and authorising local coordination based on existing NHS cancer centres would provide the most effective structure for implementation. This will significantly mitigate against delay and strict rationing to ensure the best long-term outcomes for our patients.


Rutherford Cancer Centres
Newport, South Wales - Chemotherapy / Radiotherapy / Proton Therapy
Bedlington, North East - Chemotherapy / Radiotherapy / Proton Therapy
Reading, Thames Valley - Chemotherapy / Radiotherapy / Proton Therapy
Liverpool, North West - Chemotherapy / Radiotherapy / Proton Therapy
Harley Street, London - Consultation Clinic
Swansea - Consultation Clinic
Nuffield Health
Exeter - Chemotherapy
Plymouth - Chemotherapy
Oxford - Chemotherapy
Wolverhampton - Chemotherapy
Warwickshire - Chemotherapy
North Staffordshire - Chemotherapy
Guildford - Chemotherapy
Chester - Chemotherapy
Derby - Chemotherapy
Brighton - Chemotherapy
Cambridge - Chemotherapy
Tunbridge Wells - Chemotherapy
Newcastle Upon Tyne - Chemotherapy
Glasgow - Chemotherapy
Spire Healthcare
Harpenden - Chemotherapy
Leicester- Chemotherapy
Birmingham - Chemotherapy
Solihull - Chemotherapy
Worcester - Chemotherapy
Leeds - Chemotherapy
Sunderland - Chemotherapy
Manchester - Chemotherapy
Kent - Chemotherapy
Reading - Chemotherapy
Horley - Chemotherapy
Portsmouth - Chemotherapy
Southampton - Chemotherapy
HCA Healthcare UK
The Wellington NW – Chemotherapy
The Princess Grace W1 – Chemotherapy
The Lister SW1W – Chemotherapy
The Harley Street Clinic (including LOC) - Chemotherapy /Radiotherapy
Christie Manchester- Chemotherapy
Mater Private
Mater, Liverpool – Radiotherapy / Chemotherapy
Ramsay Health Care
Essex - Chemotherapy
Hertfordshire - Chemotherapy
Herefordshire - Chemotherapy
Essex - Chemotherapy
Yorkshire - Chemotherapy
BMI Healthcare
Glasgow - Chemotherapy
Nottingham - Chemotherapy
Birmingham - Chemotherapy
Northwood - Chemotherapy
Guildford - Chemotherapy
Bath - Chemotherapy
Swindon - Chemotherapy
Blackburn - Chemotherapy
Great Missenden - Chemotherapy
Blackheath Hospital, London - Chemotherapy
Cheadle - Chemotherapy
The London Clinic
The London Clinic - Chemotherapy / Radiotherapy
GenesisCare
Birmingham -Radiotherapy
Bristol - Chemotherapy / Radiotherapy
Cambridge - Chemotherapy / Radiotherapy
Chelmsford - Radiotherapy
Bupa Cromwell London - Chemotherapy / Radiotherapy
Elstree - Radiotherapy
Guildford - Radiotherapy
Maidstone - Chemotherapy / Radiotherapy
Milton Keynes - Chemotherapy / Radiotherapy
Nottingham - Radiotherapy
Oxford - Chemotherapy / Radiotherapy
Portsmouth - Radiotherapy
Southampton - Radiotherapy
Windsor - Chemotherapy / Radiotherapy