

All Party-Parliamentary Group for Radiotherapy

Date: 14th May 2021

Dear APPG

**Ref: Joint APPG Catch Up with Cancer summit.
Consultation: Solutions to the COVID induced cancer backlog**

GenesisCare proposal: A collaboration between NHSE and GenesisCare to create a new 21 system MRI Linear Accelerator (MRL) network which could include:

- ✓ Provide initial capital funding
- ✓ Build, install and commission
- ✓ Training and Education
- ✓ Workforce
- ✓ MRL Planning
- ✓ MRL Delivery
- ✓ MRL Service & Maintenance
- ✓ MRL Replacement Programme

- What technological or innovative solutions might be implemented long and short term to tackle the cancer crisis?
- What do cancer services need to look like in the future to improve survival of cancer patients?

Vision

Over the last few years, stereotactic ablative radiotherapy (SABR) has rapidly become established as an international standard of care for a variety of localised and metastatic cancers. It offers a non-invasive and highly cost-effective means of curing localised disease and extending survival for those with more advanced cancer. There is considerable scope for further research and development to develop the evidence base, optimise radiation delivery, and combine SABR with novel systemic therapies. MR-guided radiotherapy has been adopted at many leading academic centres, as it offers a means of safely treating more complex SABR targets whilst minimising side effects – and we believe there is an opportunity to create a unique network of MRL centres, delivering complex (SABR) in a way that mirrors the success of GenesisCare's global network.

GenesisCare is close to formulating a viable model that would support each cancer alliance to deliver this vision. Partnering with vendors ViewRay, HKS Architects and our academic partner the University of Oxford, we believe such a radical proposition is ready to transform the UK oncology landscape.

The NHS has an opportunity to embrace state of the art technology to realise medium to long term benefits that will not only improve patient access to SABR but ultimately to better patient outcomes delivered efficiently.

This is a quantum leap in transforming outcomes for patients with hard-to-treat cancers.

Each cancer alliance would have access to an MRL service. The locality of each individual service remains for discussions; with options including modifying existing vacant bunkers, extending existing radiotherapy departments by adding an additional bunker or deciding to develop a new greenfield positioned strategically so as to ensure optimal access for the patients being served.

- [What are the reforms, support and resources cancer services need to tackle the COVID induced cancer backlog.](#)

Capital requirement.

MRL technology is available via NHS supply chain and currently exists in just two NHS hospitals. Our proposed network would cost the NHS more than £10m per centre, resulting in the need for an additional >£200m of NHSE capital investment to realise the vision without including additional imaging platforms and there is substantial operational cost associated with running an MRL network to also consider.

It is understood that accessing such capital remains particularly challenging and therefore GenesisCare is exploring how it can provide the upfront capital as opposed to the NHS, instead exploring a long term 'pay as you go' structure. This architecture is only viable dependent upon sufficient volumes of patients being treated and there being an alignment from all partners to drive efficient protocol adoption, pathways and workflow. The model is built on at least one life cycle of the MRL network (eg. >20 years).

Workforce

Based on both the existing and emerging evidence by embracing SABR, it is inevitable that in the near future, fewer linear accelerators and employees will be required to deliver the same volume of work as today. It is recognised that as technology advances the utility of SABR may extend to new indications, including cardiac arrhythmias and widespread metastatic disease, for example.

An MRL service is resource intensive when compared to conventional radiotherapy. The signature value of MRL technology is having the ability to see the cancer you are treating, in real time and to provide daily adaptation for each patient. If treating complex cancers, this task is performed by an experienced Radiation Oncologist. GenesisCare has credentialed more than 50 NHS Radiation Oncologists in the last 18 months in the use of MR guided radiotherapy and treated 200 patients with fully adaptive MR-guided SABR, including 37 NHS patients (from 25 different NHS hospitals) with inoperable pancreatic cancer as part of a Compassionate Access Programme.

It is feasible to have a team of experienced Radiation Oncologists supervising several MRL centres, overseeing the daily adaptation and delivery of SABR for specific cancers based on their area of expertise. It is highly probable that two types of options exist; a GenesisCare turn key solution and a blended model whereby we work in close partnership with a cancer alliance, sharing resources and staff.

GenesisCare already operates a distributed planning model. This means that radiotherapy plans are performed in strict chronological order by the most appropriate planner, regardless

of where they are physically located. The distributed model delivers rapid planning scan to treatment pathways, equitably for all patients. A similar structure would be proposed for the NHS MRL network.

Training

Our vision is to build a national MRL training centre where all training is delivered in a consistent, high quality manner. Where oncologists, radiographers, dosimetrists, physicists, and engineers learn about the technology. We would embed our existing model of robust MDT process and peer review of all cases in any such service.

It is proposed that a training curriculum is not only standardised but mandated across the 21 MRL centres, thus reducing variance and risk. The training will build upon the experience GenesisCare has already accumulated over the last two years, including the delivery of over 1,250 adaptive fractions at our centre in Oxford.

Efficiency

The NHS has the opportunity to get it right, first time. At present the NHS does not function as one business, but as lots of individual hospitals who tend to compete more than they collaborate – particularly when it comes to academic radiotherapy. Most of the incremental service developments come with a degree of compromise due to factors such as resources, time, space, or cost. Our proposed SABR solution gives us the opportunity to create something that is fit for purpose, for today and the future.

Our recommendation would be that the network utilises one collection of protocols based on international best practice; this ensures consistency in the quality of delivery. It also provides greater business continuity in terms of workforce sharing and system downtime for example.

By operating as a network, we have shown that we can accelerate the adoption of new ideas; and implement them nationally as opposed to piecemeal over an extended period of time. By creating a network, it is far more efficient to share best practice, as well as learn from experiences. as a private healthcare provider, GenesisCare potentially considers efficient operating models more so than public or academic institutions which we believe uniquely harmonises driving high quality care and reducing the cost of delivery. We feel passionately that quality and patient experience can be maintained (and improved) whilst running a very efficient service, we call this our signature 'Service of the Future'. The success of our Compassionate Access Programme indicates that there is a clear hunger among UK oncologists for these innovative, hybrid models of care.

By creating a new MRL network, we have an opportunity to leverage the value of the data. Uniform data collected and stored in the same way across each of the 21 centres. We derive the opportunity to collect patient reported outcome measures, one way, and all learn from the outcomes in time. Being given the opportunity to start over is clearly rare, to get it right from day one, but this is the moment where that chance does exist.

- What policy recommendations should the APPGs make to the Government for tackling the Covid-induced cancer crisis.
- Are current levels of funding enough to tackle the backlog?

Policy

NHSE currently decide what it commissions NHS hospitals to deliver and on the value it places on those treatments which ultimately creates national tariffs. GenesisCare believes that it can work in collaboration with NHSE to determine the true value of SABR and in particular MRL SABR. There is good international evidence that certain indications should be commissioned for SABR, but currently are not in the UK, eg. Pancreatic cancer.

The NHS currently has little true pressure to innovate and to reform, in fact the NHS tariff disincentivises it and make it unaffordable. Radiotherapy departments have been sheltered from the competition that has existed in almost all medical specialities for over a decade. The independent sector already performs thousands of NHS operations every year; this has become routine and in fact an essential support to the NHS. We believe there is a discussion to be had about NHSE directly commissioning GenesisCare to deliver NHS radiotherapy, for patients to choose where they can receive their treatment. Such a decision would stimulate a focus of efficiency, to accelerate the adoption of new services and new technologies, patients would ultimately win.

Speed

The NHS and our patients do not have the luxury of time. GenesisCare has long had a reputation for the rapid adoption of new technology and for being able to build new centres quicker than competitors. The creation of an NHS MRL network is a complex proposal but one that we believe could be delivered far quicker if the NHS partners with GenesisCare rather than working independently.

The NHS, each year is making long term decisions about investing in capital replacement programmes for conventional linear accelerators that will remain in situ for the next 8-10 years. We believe braver discussions and choices are required regarding the long-term demand for radiotherapy and the use of SABR to radically transform how care is delivered.

We look forward to engaging with APPG further on this vital discussion and stand ready to partner with the NHS to deliver something that will change cancer care in the UK.

Yours Sincerely



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