

Feedback from network of professionals delivering treatment

1. Implementation of Lung SABR

Our hospital have been in the process of commissioning SABR treatment for lung, in anticipation that NHS England will approve our business case, for over 2 years now.

So far the Varian TrueBeams (3 matched) have been commissioned for FFF VMAT treatment. We have worked closely with another Trust to demonstrate we can produce acceptable treatment plans and have then been in collaboration with another centre to align our clinical protocols with theirs, so we can contribute to the agreed SABR delivery policy.

We have draft SABR protocols in place which have been agreed and discussed at the Lung SABR multi-disciplinary group.

There are 2 physicists and 2 dosimetrists able to create Lung SABR treatment plans. We have 2 Consultant Oncologists available to plan lung SABR and to allow cross cover and peer review of the SABR plans.

4DCT has been commissioned and available for Lung SABR. Our existing CT scanner (Canon Aquilion LB) will support the service and is scheduled to be replaced in 2021 which will enhance our SABR planning capability.

Outstanding work and barriers for the completion of lung SABR

Most of these issues are currently on hold due to the Covid crisis but could be re-activated quickly.

- Business plan needs to be submitted to NHS England to gain their approval to commence treatment. There is a version in draft.
- Business case to be presented to the SaTH Trust to allow lung SABR treatment, which is in progress with a timeline currently on hold.
- RTQA needs to be performed – funding for this is needed and either comes from NHS England agreeing to commission us for SABR or finding the money in-house, which is difficult. Practically any visit from them would have to be after current lockdown measures are lifted.
- RTQA will involve significant clinician's time to outline the test plans, physics time to plan and trials time to visit the department to perform and audit. This would be given very high priority if there was any agreed pathway to NHSE commissioner agreement.
- Training to be rolled out to specialised staff initially and then to the rest of the department.
- 4D-CBCT is available and is being commissioned for clinical use. This is available on one linac but there are plans to extend to a second.

- Expected numbers are such that patients would be treated on one linac with a second as back-up.
- A buddy system would be needed for the first few patients to peer review our volumes and treatment plans.

2. Lack of patients and issues of backlog

The two machines in the department in which I work have capacity to work clinically for 8.5 hours, first patient at 8.45am and last at 5.15pm, so we were treating about 30 patients on each machine every day. We were also in the process of expanding our capacity to start working 7am to 7pm days due to demand. Looking at Monday when there are usually lots of new starts, one of our linacs has four lung patients scheduled (one hour's work); the other has 17 patients covering other treatment sites (finishing at 1.45pm). The vast majority of our new starts are breast patients on the Fast Forward protocol (if breast only), palliative patients and lower GI patients who would normally be offered 25# chemo rad RT but are now coming for 25Gy/5#s.

As radiographers, we prefer being busy to sitting around. It's frustrating knowing there are patients waiting to start radiotherapy when we have so much space on our machines. And we know that when restrictions are lifted we will be inundated with referrals as we clear the backlog of delayed patients, get a return of post-surgical patients and deal with an influx of GP referrals as people start venturing back to see their doctors. It's also worrying to think of how many of these people will also now find themselves on a palliative pathway rather than a radical one because of the delays, surgery cancellations and their own fear of stepping outside to get their symptoms addressed.

We're ready for the workload and know our services will be stretched when the coronavirus situation calms down but it would be good to have a few more patients coming through now to take some of that pressure off.

3. Staff

4/5 treatment rads Working from home (WFH) and less than half of the physics team WFH. Most planning/dosimetry team rotating as some have pinnacle on PC at home. Difficult to communicate at times but managing. **VPN connectivity** can be rubbish as so many people are now using it which can make things a bit more difficult. Got enough staff in work at the moment, however not always enough space to keep 2 metres apart though and as **lost desktops and computers for people who are WFH there aren't enough at work**. Management working on that though. Trying to rotate staff on patient contact/paperwork time, to hopefully reduce their risk. Our trust are saying that if a member of our household now has symptoms, meaning that we would have to self isolate - ourselves and the person in our household are able to be tested, and this is something our management would sort out and would mean that hopefully we would be able to get back to work quicker!

4. PPE

Have got some now but were told it would only last about 8 weeks. Glad to have it. Similar issues that it does take a bit longer per patient, it can be very hot in the control areas and in the room when setting patients up. Encouraging people to take regular breaks, as people can get dehydrated a lot quicker and they are conscious that they have to keep taking and using a new mask (**and feel like they're wasting PPE**). Trust has sent out proper guidance and we are using it for every patient. A core team of staff have/will be fit tested for FFP3 masks. Currently this is down to one patient (not showing symptoms) but is high risk as they are a CAR risk meaning that if an emergency situation were to occur only the fit tested rads could help.

5. Transport

Some patients late as drivers late or are new volunteer drivers not knowing the way. Management have contacted local Royal Marine unit to help, so hopefully will hear back from them soon.

6. Redeployment

Nothing yet but diagnostic rads and wards struggling at times. Potential for redeployment as an HCA on wards or as an diagnostic assistant rad. We have been asked as a trust if we wanted to volunteer for the nightingale but we have asked about our skill mix and may be more useful to stay put in RT for time being. Just because no one else can be redeployed from another department to do our job!

7. Wellbeing

So much uncertainty and not everyone coping. Wellbeing team and some staff trying to help with this. **New CPR guidelines a bit tough to take in** still though (put mask on patient, then put them on 15L oxygen non-rebreathe mask, don't start CPR and wait for resus team to arrive), don't get cardiac arrests much but seems more likely with everything going on too.

We have a temperature station working well to screen staff and patients coming into the department - being managed by ward HCAs and rads.

8. Patients

We have a lot of 5# breast starting and a lot of our prostates have been delayed and our on hormones. We have been told that we will be very busy (due to trying to catch up from this) in the summer and may need help from other departments - but still too early to tell from this.

Suggestions

Software, machinery and treatment Planning

Upgrade every machine in the country to the latest s/w versions, and have a dedicated team teaching how to use this resource (this can be done using our on-line technologies, where we will not be traveling to sites)

Ask manufacturers to run as many courses on-line (not only is it good for this, but also good for the environment)

Ask manufacturers, for example can we do a preventative maintenance inspection (PMI) remotely, do they need to come to site? Can we get our physics and engineering staff to work with them to facilitate this? Most modern linacs can be logged into let's use this technology more freely.

Think about how we as a country can pull our resources on treatment planning. If for example you have a Varian True beam linac they are all manufactured so well nowadays that the golden beam data will be so close to the hospital machine we can use this for all of our planning. If we upload our CT images to the cloud we can achieve this.

In the same way we can also utilise this technology to do our plan and volume peer reviews, this would make so much sense and would speed up this part of the process.

When diagnosing, can we cut out the diagnostic scan and go straight for a CT planning scan, report against this, then use it to plan on? By the time we do a diagnostic scan we often know if the patient will need treatment or is suspected of it. We can look at this in so many ways, it will reduce the diagnostic, planning dose to the patients. Clearly this will not work on all patients, but it will work for some.

Staff and protocols

Utilise our staff differently. For example, can we do our patient follow ups differently, can we use our radiographers? Does it have to be a doctor?

Minimise the number of radiotherapists at a treatment set to the bare minimum . Lets only have who we need to treat a patient at set.

Clean in between every patient. If this means going to a longer day, or a split week, or a 7 day week, we need to think how we offer our therapy

Have a core group of medical physics experts (MPE's) available if a hospital finds itself without that expertise. (This must also include Radiation Protection Advisors (RPA's) . Even if this core group worked remotely from their main hospital this will keep them safe. And most importantly keep every hospital going.

Many of the above points can be implemented straight away with the technology that we have at our fingertips and will help every department across the country today (this would require our standardised clinical protocols)

Therefore, what we need urgently are three things

- 1) National clinical protocols,
- 2) National consent forms
- 3) National peer reviews

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