Notes from a meeting of the Image-Guided Radiotherapy Special Interest Group.   
Worcester Oncology Centre. Friday 7th October 2016

LIST OF ATTENDEES

Lisa Addis, Neil Harvey, Megan Aldus, Steven Higgins, Helen Bayles, Louise Killey, Bronwyn van Blerk, Claudia Krendl, Alison Blower, Shrinivas Kuthpandy, Kelly Tune-Blundell, Colin Lee, Claire Bode, Erika Bowkett, Michelle Price, David Bromley, Kpaul Robins, Matt Clark, Alison Round, Laura Crowney, Zoe Rowett, Helen Colli-Smith, Oliver Shoffren, Claire Davies, Carole Steadman , Lisa Davies, Sarah Turner, Rebecca Dove, Louise Turtle, Louise Drumond, Jacky Walters, Claire Gillingham, Nicola Ward, Helen Hamer, Gareth Webster

Thanks were given to Michelle, Jacky and Laura for hosting the Special Interest Group IGRT Meeting at Worcester Oncology Centre.

Thanks were also given, in her absence to Jenny Poole for establishing the SoR IGRT SIG.

Terms of reference were agreed. Read by Kelly Tune-Blundell

The role of Administrator for the group may continue to be Jenny Poole. This will be confirmed post

Laura Crowney led a discussion around CBCT training

‘Active’ image review was the consensus for training; reviewing an image and then discussing it in a peered environment

Annual re-competency is often linked to annual appraisal/PDR

The RADAR trial package, an anonymised patient training database and the e-lfh website (e-learning for health) can all be helpful resources for IGRT training

Some departments have also used a training database from Elekta and the Varian T-box

An ‘audit’ system with an agreement of 2mm with trainer is also used

Powerpoint and self-directed learning packages were discussed

Moving away from charting a ‘number’ of images to establish competency, to discussing case studies in-depth to gain confidence

Consenting for image use was discussed

Variety of timeframes for establishing competency used. From immediate Band 5 recruitment to 6 months post-qualification

Competency should not be grade/band dependent

A discussion that techniques sometimes develop quicker than the ability to train staff

New techniques need an MDT approach, involving presence of radiographers, dosimetrists and prescribing clinicians

Weekly clinician review of images is helpful, particularly when radiographers are gaining confidence making online decisions. The importance of expertise to make online decision making was discussed.

2 person online review or 1 person online and 1 person offline review of all images

A KVM switch set up on XVI enables offline review away from the linac

Different competency ‘levels’ can be useful. For example: 1= safe use of equipment. 2 = online decision making for non-complex techniques. 3 = online decision making for complex/advanced techniques.

A variety of grades of staff are needed for imaging.

Majority of imaging leads are Band 7.

Thanks to Matt Clark from the London Clinic for forwarding the following notes on all presentations

Gynae imaging - Lisa Davies / Claire Davies (Velindre Cancer Centre, Cardiff)

Slides presented

8 Bunker site with variety of protocols

No hydration protocol other than drink before scan

No rectal preparation

Offline matching performed

Elekta machines used for their longer field of view

Bladder filling issues highlight potential for PTV miss.

-Manual match off bone with set structures to have turned on defined to ensure consistency and relevance to match.

Rectal issues highlighted – inconsistent

Soft tissue match can result in changes to FSD, normally of no significance on investigation.

Move towards plan of the day discussed

No CBCT restrictions on number of images per day

Discussion of examples – treat or not treat decisions.

No set tolerance for bone to soft tissue match

Rotations <5 degrees permitted

Discussion-

Pelvis tilt seen and acknowledged as cross centre common problem

Is 3 degrees more appropriate?

Vac bags used in some cases for these patients

6DOF couches desirable

Some centres use a pelvic lift exercise routinely (Royal free)

London clinic found raising knee fix reduced pitch.

One centre use a tattoo on the knee for indexing and pitch

Trousers on/off need consistency

Knee fix to lateral tattoo measurement suggested

Arm positions discussed, elbows occasionally in the way

If on CT the bladder is not sufficiently full there is no rescan – this is taken as the patient’s norm.

6cm maximum rectal diameter

Discussion amongst group as to prevalence of taking a rectal assessment scan with mixed views and also on the topics of making patients empty before drinking for full bladder preparation, is this advantageous? And whether empty bladder could be used for cervix plans.

Rectal imaging – Open discussion

Bony match performed in a number of centres

Discussion as to whether the sup aspect of the rectum was easily visualised on CBCT

Consensus that less shift from bone are observed for this treatment site – related to size of PTV margin? Or user confidence?

Image optimisation is key especially with gas in the rectum

Daily CBCT is in use in some centres – some discussion where restraints had been put on rectum having to fall in CTV –consensus that the PTV is the structure to match within.

CNS Imaging Clare Bode (Technical Lead Practitioner, Queen Elizabeth Hospital)

Tomotherapy used exclusively. Presented on slides.

Discussion as to problems with image quality on conventional linacs and children’s bone density.

Errors with match lines not unheard of, prompted move to tomotherapy.

Upper GI + Stomach Robins Kpaul (Advanced Practitioner, Queens Centre for Oncology)

Slides presented.

Discussion,

Gastrographin used in some centres

Duodenum outlined as a structure to aid soft tissue matching – some felt this was useful others queried whether imaging quality was good enough for this to be useful.

Abdominal compression used in some centres discussed effectiveness, does not solve problems of gas in transcending colon.

Sabr used with compression plate

Empty bladder protocols – open discussion

Prostate only – 18 months experience at Mt Vernon (awaiting paper publication)

Christie hospital have been using for longer?

Discussion moved on to CHIP and daily prostate doses of 3gy , increase in Swollen rectum reported, query as to whether this was due to increase in use off micro enemas however this was also reported from centres with experience of using micro enema where swollen rectums not previously seen.

Discussion as to increase in bladder toxicity also.

Reports of patients missing fractions due to toxicity.

Thanks to Laura Crowney from Worcester Oncology Centre for forwarding the following notes from the Elekta specific manufacturer session.

An Elekta User Group meeting had been held on Thursday 6th October, but there had been no attendees from the IGRT SIG as little had been known about the meeting.

There is limited room available on the MOSAIQ page for setup in the treatment room. Centres reported that there is the potential for error as the window must be scrolled down in order to fully visualise. There is space within the MOSAIQ window that could otherwise be used.

There is general confusion as to whether localisation trend review (LTR) and Couch Move Assist (CMA) can be used for I-view without Synergistiq.

Centres are starting to use kv planar imaging but it is still not widely used, as it is not felt to be sufficiently adaptable due to the fixed field sizes available.

Centres would appreciate more consistent Elekta technical support. For example explaining different issues to different Elekta technicians can be time limiting. Perhaps a smaller team assigned geographically to a group of clinical departments would be a solution.

There have been incidents resulting from the ‘dismiss’ button after an image has been taken.