NCRI LYMPHOMA GROUP - Stanford V vs. ABVD Phase III Trial for Advanced Hodgkin's Disease

QUALITY ASSURANCE PROGRAMME: QA SITE VISIT

Our objectives on this visit include:

To assess dosimetry in a 2D geometric neck phantom
To discuss patient TLD measurements and results
To discuss any outstanding issues with the QA questionnaire

We are aiming to spend approximately 4 hours in the department during which we need access to the machines for 3 hours. We understand that the treatment machine may be available to us from 5.00pm. We would request that a member of staff from your department take an output measurement using one of your ion chambers.

Please could we request the following be available:

1. Time set aside for treatment machine measurements, approximately 3 hours needed (either during the working day or after hours). The allocated machine should be routinely used for treating lymphoma patients.
2. Completed plans or calculation of monitor units as per departmental protocol for lymphoma patients for the enclosed phantom outlines. More information is given in the additional notes.
3. 5cms of approximately water equivalent material that can be used as backscatter.
4. Quality Index of the machine to be used (20/10 ratio).
5. Percentage depth dose at 5cm deep 100cm FSD or TPR/TMR at 5cm deep 95cm FSD for a 10x10 field for the machine to be used.
6. A reading of pressure.

ADDITIONAL NOTES: CT Plan

ENCLOSED (see in more detail below):
CD containing

- ANT Radiograph (from Acuity) imaged at mid-plane (also isocentric plane). Field size and shielding have been drawn on (50% edge). This is provided in DICOM and TIFF formats.
- TIFF images of sagittal (at ISO) and coronal slices from an AcQsim scan (visual aid). ISO and other measuring points have been marked on it for illustration.
- A full CT set of the phantom in DICOM format.

Instructions

- Isocentre location and positions of POI (relative to tattoos) are tabulated below.
- Field size and orientation.

REQUIREMENTS:

- Phantom to be planned as you would a Hodgkin's Disease neck + SCF patient (NB the phantom design is such that the neck is inferior to the SCF!).

- Prescribe a dose of 2Gy to the isocentre.
- Please produce two separate plans (or monitor units): one with shielding (as marked for both ANT and POST beams) and one without.
- Use physical blocks or MLCs, as you would normally.
- If, on occasions, you use a SUP-INF wedge on patients, please plan the phantom in the same way. Otherwise use plain fields.
- Calculate doses to the POIs requested.

PLAN DETAILS

ISOCENTRE:

- ISO is located at mid-plane and central axis (see table below). It is marked by the centre of the graticule on the ANT radiograph provided (imaged at mid-plane, FSD=92.2cm).

FIELD SIZE & ORIENTATION:

- The field size for each beam is **15cm x 18cm** on imaged plane.
- Plan two fields (parallel-opposed pair): ANT (0°), POST (180°).

SHIELDING:

- For the shielded plan, use a rectangular block, size **12cm x 6cm** on imaged (isocentric) plane. Use DICOM/TIFF images for positioning.
- Use either MLCs or a physical block, as you would for a Hodgkin's Disease patient.

LUNG INSERT:

- Density is 0.2 g/cm^3.
- Dimensions are 6cm RL x 10cm SI x 5cm AP.

POINTS OF INTEREST:

- ISO and POI positions relative to tattoos are tabulated below. Please calculate the doses at these points.

POINT OF INTEREST	RIGHT / LEFT (cm)	ANT / POST (cm)	SUP / INF (cm)
ISO	0.0	1.3 Post	4.6 Inf
A	0.0	1.3 Post	2.0 Sup
B	0.0	1.3 Post	11.0 Inf
5 C	0.0	3.8 Post	1.0 Sup
5 R	6.0 Rt	3.8 Post	1.0 Sup
5 L	6.0 Lt	3.8 Post	1.0 Sup
6 C	0.0	3.8 Post	3.0 Inf
6 R	6.0 Rt	3.8 Post	3.0 Inf
6 L	6.0 Lt	3.8 Post	3.0 Inf
7 C	0.0	6.8 Post	6.0 Inf
7 L	6.0 Lt	6.8 Post	6.0 Inf
8 C	0.0	3.8 Post	9.0 Inf
8 L	6.0 Lt	3.8 Post	9.0 Inf