Meeting of the SWAG Brain & CNS Cancer Clinical Advisory Group

13:00-16:30, Wednesday 17th May 2023

Engineers' House, The Promenade, Clifton Down, Bristol, BS8 3NB

Chair: Mr Venkat Iyer

	REPORT (To be agreed at the next CAG Meeting)	ACTIONS

1. Welcome and apologies

Please see the separate list of attendees and apologies uploaded on to the SWAG website here.

2. Review of last meeting's report

As there were no amendments or comments following distribution of the report from the meeting on Wednesday 12th October 2022, the report was accepted as finalised.

3. Coordination of patient care pathways

Management and pathways for CNS Lymphoma

Presented by Consultant Neurosurgeon V Iyer and Consultant Oncologist L Hawley

A document produced for the purpose of optimising the management and referral pathway for patients with suspected CNS Lymphoma, was circulated prior to the meeting for feedback from the group.

Background:

Referrals to the Bristol Neuro Oncology Group (BNOG) for suspected CNS Lymphoma are mainly received from the hospitals within the SWAG region (GRH, NBT, RUH, SFT, UHBW, and YDH), although some are from further afield. Most commonly, patients are referred from emergency departments, local general medical teams, or their GP and, on occasion, delays can occur in the diagnostic pathway.

As a result, BNOG representatives met with Haematologists from across the region to draft the pathway.

There are a few areas that still need to be clarified, including avoiding starting steroids if CNS lymphoma is suspected. It also advises on the investigations and information to gather prior to referral to BNOG.

The final requirement was to get contact information for Haematologists in each centre for advice and guidance on the cases where active treatment may not be recommended, to protect patients from unnecessary investigations.

Feedback to date has been that the BNOG and Haematology referrals need to be closer to the beginning of the pathway.

The pathology component also needs to be included.

A lumbar puncture is suitable for any suspected CNS Lymphoma as this may avoid the need for a CNS biopsy. However, to confirm genetic subtype, a solid tissue biopsy is required, so the lumbar puncture (which can cause a delay of 5-7 days to the pathway) can be avoided if a direct biopsy is going to be possible.

Although it is not possible to refer to Haematology until a CNS lymphoma diagnosis is confirmed, the Haematologists are not opposed to being contacted for initial advice on the small number of patients that will be borderline for treatment or for Best Supportive Care.

All other patients will require a solid tissue biopsy, including curative intent treatment with MATRIX for fit young patients, de-escalated treatment for fit but older patients, single agent Temozolomide / palliative radiotherapy for older less well patients.

It was recommended that the pathway should be redesigned to reflect these different patient scenarios, with young fit patients coming straight to the on call neurosurgical team for a biopsy, and high risk less fit patients being considered for lumbar puncture and haematology review.

Neuro-oncology on-call average response time is 15 minutes.

Less straightforward cases include those who are known to haematology having had treatment for extracranial lymphoma, and cases which look inflammatory but are also suspicious of lymphoma; these will also need to be included in the pathway.

The message not to start steroids needs to be clarified in the emergency settings as this can be difficult to avoid when it can rapidly address symptoms.

Action: The pathway guidance will be re-drafted using patient scenarios. Haematology CAG will be contacted again for advice on those patients who would definitely be excluded from treatment based on age plus fitness criteria, and those that they would consider as borderline and needing haem review. **L Hawley / V Iyer**

Patient Representative A Holness asked for clarity over consideration of patient choice and shared decision making.

The pathway aims to improve patient choice, as it will allow those patients who are borderline to have a proper discussion about the risks versus benefits of treatment.

Due to the nature of the disease, some patients rapidly lose the capacity for decision making, and best interest decisions need to be made with the input from Haematology.

4. Research

Clinical Research Update

Please see the presentation uploaded on to the SWAG website

Presented by Research Delivery Manager C Matthews and Consultant Oncologist C Herbert

National clinical trial recruitment from April 2023- May 2023 shows that 199 patients have been recruited to Brain and CNS cancer trials across the 17 research networks; 4497 patients were recruited in 2022/23. The majority were non-commercial observational trials.

A comparison between national and regional recruitment levels shows the SWAG region performing well and exceeding pre-pandemic recruitment.

The trials open across the region and in set up were described in detail, as documented within the presentation. It was noted that the Chief Investigator for the trial *Identifying and validating molecular targets in nervous system tissue* is CAG member Consultant Neuropathologist, K Kurian.

Recruitment last year:

- NBT - 79
- BHOC - 38; BRI - 5; UHBW - 1
- BRHC - 27
- YDH - 14
- GRH - 2.

There is one trial in set up called APPROACH.

The Question 58 in the National Cancer Patient Experience Survey 'Cancer research opportunities were discussed with the patient' scored below average across SWAG (42%) in comparison with the national average. Brain and CNS CAG scored significantly higher (73%) and so the CAG are asked to share best practice on how to increase conversations about research.

Patient Representative feedback is to let the patient know that research trials have been considered, even if the outcome is that there is no eligible trial available.

Action: To look at the number of Brain and CNS cancer patients who are accessing research studies; patient numbers will be pulled from the Somerset Cancer Register. — **H Dunderdale/ C Matthews**

An NIHR 6-month Associate Principal Investigator (PI) role is open to any interested clinician who doesn't have research in their current role. It allows associates to work alongside current PIs on studies (as documented in the presentation) signed up to the scheme.

Any PI interested in getting help from an associate while helping their personal development is to get in touch.

Consultant Neurosurgeon N Barua has recruited an Associate PI.

NIHR website links and team contact details are available within the presentation.

The MATRIX trial is looking at Whole Genome Sequencing (WGS), which overlaps with NHS England's plan for this to be standard practice, although there is no funding to achieve this outside the support of a research trial.

All CNS tumours are eligible.

Action: To add eligibility for the MATRIX trial as part of the MDT outcome — **C Herbert/S Allen**

Research Nurse S Allen has been liaising with the team and research activity will be due to commence soon.

Tissue is to be sent to the laboratory fresh frozen and results will be processed in Birmingham. Turnaround time is not expected to be in time to inform initial treatment decision, which will continue as usual without delay.

5. Patient experience

5.1 Shared Decision Making Matrices

Presented by Consultant Neurosurgeon N Barua

The team in Southampton had recently published a paper on the impact of shared decision making training and developed some Shared Decision Making Matrices to help both patients and Clinicians deliver patient centred care; it is a legal requirement to make patients aware of every different treatment option applicable to them.

The matrices will facilitate the four surgeons in Southmead to deliver the same treatment options to all patients in as summarised pertinent way as possible via bullet point flow charts, while not replacing individualised interactions.

They should also be a useful guide for the oncologists or other health care professionals who see the patient prior to referral to BNOG and may want to introduce these concepts.

The ultimate aim is to find out the most important priorities for the individual.

As the paper from Southampton had emphasised the complexities of shared decision making, CAG recommends arranging provision of formal training.

Action: To find an appropriate shared decision making training course with interactive role play and funding for the team to attend. **N Barua/H Dunderdale**

Discussion:

The matrices had been circulated to CAG for review prior to the meeting; Patient Representative C Monnery stated that they contained everything she would have wanted to know about.

They could also help with the discussions on how neuro-oncology treatments affect Quality of Life (QoL).

Patient Representative A Holness recommended including patient representatives in the training to help with the role play sessions.

For patients that do not have capacity to comprehend the decision matrices, family members can be enlisted to help.

It is important to recognise that some of the statistics are generalisations and not specific to the particular patient/tumour location.

Ideally, training would be arranged before the matrices can be introduced into routine practice to help manage delivery of discussions around the effects of treatment versus the choice for no treatment or minimal interventions in preference for QoL, in particular for patients diagnosed with a limited life expectancy; treatment can result in a lot of time spent away from home.

For patients that used to be treated in RUH that now are managed by the Bristol team, the burden of travel can be a deciding factor.

5.2 Prehabilitation Service

Please see the presentation uploaded on to the SWAG website

Presented by Physiotherapist C Moran

At the last meeting, the service had just commenced, and an overview of the service delivery plan was provided. The update today will review the first 6 months and establish what is working well and the steps required to further develop the service; feedback from the team is welcomed.

The Prehabilitation Patient Pathway is documented within the presentation. The team see all glioma and metastatic patients who will undergo surgery at NBT, in particular any patient that the Consultant Surgeons predict will have a neurological deficit post-surgery, so that patients can be prepared to manage symptoms and quality of life can be improved. Other measures of the service include getting more timely access to community services and shortening hospital length of stay.

Clinics are run alongside the Consultant Clinics on Monday and Wednesday so that they are seen directly after their diagnosis. Patient feedback varies, with some finding this very helpful and some preferring to be seen on a different occasion, which is most commonly the pre-operative appointment.

Baseline QoL and Occupational Therapy, Physiotherapy and Speech and Language Therapy (SLT) function measures are collected to pass on to the in-patient team so that any changes can be rapidly identified.

High grade metastatic patients are seen one or twice prior to surgery as turnaround time is within 2-3 weeks. As there is more time to manage those patients with low grade gliomas, the aim is to see them 3-4 times prior to surgery.

Once discharged from hospital, there is currently capacity to provide an Enhanced Recovery for patients requiring additional SLT support as the waiting lists in the community are very long.

This had been experienced by Patient Representative C Monnery, who had struggled to get help with SLT for many months, resulting in seeking help from the independent sector, and so this service improvement was very much needed.

Patients are followed up 4-6 weeks post-surgery, just at the beginning of commencing oncological treatments to provide advice on optimising health during this period. Baseline measures are repeated and relevant onward referrals instigated to relevant community services. Patients are asked to share the goals most important to them to ensure that the therapeutics provided are individually tailored. A patient experience questionnaire evaluating the service is also provided at this point.

Community Physiotherapy have quick access in Bristol and Gloucestershire at present. A pilot in Bristol is enabling patients to be picked up a few days after discharge, and the same in Gloucestershire. There are gaps in swift provision of physio in other areas.

Over the past 6 months, 73 new patients have been provided with support from the prehabilitation service, with the majority of appointments being face to face. More patients had been expected and the reasons why some patients may have been missed is being explored.

Follow up can be virtual or face to face depending on the patient's preference.

An Evaluation Dashboard is being developed where all of the quality indicators can be entered to show the effect of therapy input.

Feedback on the service from patients and the CNS team has been really positive to date. Outcomes have shown improvements demonstrated in some patients' baseline assessments.

It is hoped that a business case can be put forward to make the service permanent as funding ends in September 2024.

Discussion:

Ideally, evidence needs to be gathered that demonstrates income generating activity and the cost savings made but, ultimately, as a Trust / Nation-wide initiative that meets patients' unmet needs, it should be supported.

CAG Recommendation

Patients who have been seen for re-resections have reported that they wished they had received the same support the first time around.

The paper on prehabilitation published by Manchester has provided proof on how cost savings can be achieved in other cancer sites; the team now need to show how this works in the local setting, although it is recognised as harder to demonstrate functional improvements in the Brain and CNS cancer patient group.

Feedback from the charity groups will also support the business case.

The number of patients who have not been captured by the service could be due to the part time service provision and the turnaround time associated with emergency admissions.

Action: To further investigate the patient cohort that have not been seen to ensure all relevant patients have access to prehab. — **Prehabilitation team**

Action: A business case will be drafted by J Masters with involvement from the team and T Gardener. — **J Masters / T Gardener**

The Prehabilitation Team were thanked for the service which has been found to be very helpful, especially due to the flexible way that the team work.

5.3 Charity involvement updates

The team from Brain Tumour Support have organised a fundraising gala dinner on Saturday 20th May 2023 to support the 6 month pilot that is underway, working with the team in Southmead to ensure that there is equity of earlier access to support for patients and families at the initial, what is considered the 'crisis point', time of diagnosis. This involves an automatic referral rather than a discussion of the options available. The patient can opt out or in when contact is made.

Urgent referrals are made within a few days and routine referrals within a week.

Action: Data will be available to share at the next meeting. — **T Mitchell-Skinner**

T Mitchell-Skinner recently represented the charity at the Dame Tessa Jowell Foundation 5 year Anniversary event where there was the opportunity to share the campaign priorities for the next year, which is focused on accessing services at an earlier stage.

Support groups are now returning to face to face. The first one was held at the Southmead Macmillan Centre last month and had great attendance. Topical Zoom meetings will still be held for those who are unable to attend.

The charity is working with the welfare and benefits office to improve patient access to information, which is a project funded via a corporate route.

Patient Representative C Monnery thanked Brain Tumour Support for their support.

Patient Representative A Holness emphasised the importance of earlier access to support; this was not available to his family member at diagnosis in 2010.

Support Specialist R Hurley from Brainstrust reported that the charity has received funding from The Rank Foundation to implement a project to provide patients and care givers with coaching support. The team are working with neuro-oncology centres locally and in Cardiff, Oxford and elsewhere. A minimum of two coaching sessions will be offered.

Work is also underway with the Wilton Centre and St Helen's and Knowsley to improve the emergency brain tumour pathways by providing them with feedback from patients to hear about their experiences right from diagnosis, and what matters most to them.

A new Patient Information Leaflet has just been developed called 'what to expect when diagnosed with a brain tumour' which was co-produced with patients.

Action: to share results from the emergency pathway project at a future meeting. **R Hurley**

6. Quality indicators, audits and data collection

6.1 Recording Grade 1 and 2 Tumours for Cancer Waiting Times Targets

The regional Cancer Managers have asked for advice on how to interpret the new Cancer Waiting Time guidance which is changing from 1st July 2023. Current guidance includes patients diagnosed with WHO Grade 3 and 4 tumours. The new guidance is to include all malignant brain tumours regardless of WHO Grade.

Cancer Waiting Times Targets, which start from the day that the GP sends the referral, include the 2 week wait to first seen, 28 day faster diagnosis standard which is the day by which you tell a patient if they have been diagnosed or cleared of cancer, 31 day decision to treat, and 62 days to commence treatment.

National guidance states that surgery should be considered within 6 months for patients with low grade tumours.

Due to the slow growing nature of Grade 1 and 2 Brain and CNS Cancers, it is not appropriate to track these patients via the CWT pathway.

If there is a clinical need for the patient to be managed urgently, due to hydrocephalus for example, this would always be arranged in an appropriate time frame.

Brain CAG agree that the SWAG Cancer Access Policy should remain as is with WHO Grade 3 and 4 tracked in accordance with CWT targets. **AGREED**

7. Service developments

7.1 Developing novel intra-operative speech tests for awake brain surgery

Please see the presentation uploaded on to the SWAG website

Presented by PhD Student H Mumtaz

The novel intra-operative speech test project for awake brain surgery, funded in part by the SWAG Cancer Alliance, is based at the University of the West of England (UWE) and co-supervised by Consultant Neurosurgeon N Barua and 2 UWE colleagues.

An example of a patient who experienced the loss of the ability to communicate everyday life messages due to their brain tumour removal was provided via video.

Awake brain surgery is undertaken to try to reduce the risk of damaging the tissues that control language and other cognitive and motor functions while maximising tumour removal.

Once the patient is awake, they are asked to perform several language tests that have been designed following specific criteria.

Original tests were far simpler and involved counting numbers but are now more sophisticated and involve object naming and action naming. However, there is room for improvement as deficits in speech are common and it is unsure if they are testing all necessary language functions.

The aim of the project is to create a test that is more relevant and familiar to the UK population (existing tests used have been designed with Dutch and American populations in mind), sensitive and complex to tap into a variety of linguistic functions. Anecdotal evidence from patients suggests that existing tests are considered far too simplistic.

The British National Corpus is being used to compile test items.

It is important that it reflects the multi-lingual and multi-cultural nature of the British population.

The aim is to identify the most pertinent words and symbols relevant to the population and remove those less relevant such as the skiing action.

The British National Corpus is applicable to the whole of the British population as it looks at frequency of use of words from all sources of publications and can be assigned to pull out information for a specific demographic.

To make the test more complex, multi-word expressions are going to be compiled.

Step one, to design the project, has been completed, and Step two, item selection, is now in progress.

In Step 3, university students, university staff and the wider community in Bristol will be recruited to pilot the test, aiming for it to be tested by a wide demographic of people from different age bands.

The test scenario will mimic how the test is given during surgery and will be considered valid if 95% of the population recognise what it is within 4 seconds.

Discussion:

This is ground-breaking work that has never been completed before.

Ultimately the aim will be to analyse if this results in better linguistic outcomes for patients.

For cognitive testing of emotions, there are mind and eye tests that could be incorporated, but there is a limit to how long the test can be tolerated (approximately an hour and a half) and so a need to prioritise what can be included.

Patient Representative C Monnery can remember the tests, and experienced being able to think of the word related to the object but was not able to say the word out loud during the procedure.

Patient Representative A Holness experienced how the Clinical Nurse Specialist personalised the test during his family members awake craniotomy by asking questions about his studies and family members prior to the surgery that were repeated during the test.

The test will need to be objective rather than personalised so that it doesn't elicit emotional responses and cloud the results of linguistic monitoring.

8. Clinical Guidelines

8.1 Neuropathology at Southmead

Please see the presentation uploaded to the SWAG website

Presented by Consultant Neuropathologist K Urankar

Consultant Neuropathologist J Davis was welcomed as a new member of the team and brings a specialist interest in introducing emerging digital and molecular technologies into brain tumour care.

Since the last neuropathology update, there have been some substantial changes following publication of the new WHO guidelines (2021).

The guidelines incorporate an increased amount of information about molecular characterisations and gradings of the tumour to inform treatment and prognosis. This results in increasing the time and resources spent in processing the samples. Although it has been possible to adopt many of the changes, some have not been possible to achieve due to staff shortages.

New entities have been added which will better inform how the tumour is expected to behave.

Many of the tumours now require a molecular grade as well as histological grade before the diagnosis can be confirmed, and a list new low grade and high grade tumours definitions are listed in the presentation.

Glioblastoma can be classified with more accuracy based on genetics, age, or molecular profile. However, specific treatments have yet to be developed for all of the sub-types.

There are molecular tests that are classed as essential and some classed as desirable.

A targeted gene panel that looks at a maximum of 500 alterations is now undertaken instead of Whole Genome Sequencing. Methylation profile array is also completed on top of this which give the individualised fingerprint of the tumour.

The gene panel is targeted according to age (there are different adult and paediatric panels) and can be further divided into low grade and high grade according to the histology.

Another major change is how molecular results alter WHO grading of IDH mutant and IDH wildtype gliomas. If the CDKN2A homozygous deletion is present in IDH mutant, histological grading is over-written and changed to a

Grade 4. IDH wildtype will not exist anymore as they will be defined according to gene alterations and will be upgraded to Grade 4 if any of these are found, otherwise it could (very rarely) be an astrocytic low grade tumour. Meningiomas can also be upgraded to WHO Grade 3 if the CDKN2A homozygous deletion is present.

Further details are within the presentation.

Onsite testing now includes gene panels, RNA fusion, FISH and DNA methylation arrays.

Whole Genome Sequencing is funded via NHS England which requires consent. Not many samples have been sent to date.

The team have also attained funding to take part in the Nanopore pilot which will give access to technology to provide genomic and epigenomic diagnosis of brain tumours on the same day that the tumour is removed. Results will be compared with methylation arrays to check accuracy; the tissue is to be sent fresh. It has been shown to work in other centres.

All of the tests that are available make the NBT neuropathology department an international centre of excellence.

Many centres in America are yet to have access to gene panels.

Increased accuracy in diagnosis and prognosis should lead to more tailored treatments in the future.

The pilot costs £30,000 which will be sufficient to process 100 samples.

Action: Once completed and possible to prove the benefit, another business case will be drafted for ongoing funding of staff and the relevant kits. **K Urankar**

9. Clinical opinion on network issues

9.1 Work Programme

To be reviewed at the next meeting due to time constraints.

9.2 Updates from each centre

NBT: Since the 1st of January 2023, 78 gliomas have been diagnosed, 25 of which were metastatic and 7 cases had other diagnoses.

Since the Brain Tumour Support pilot started on the 3rd April 2023, 26 people have been referred; positive feedback has been received to date. 53 eHNAs have been completed and 52 telephone clinics held.

RUH: The Brain and CNS service is not able to take new patients at present and will be treated in Bristol instead. Currently there are 7 patients still on treatment and another 39 on surveillance under the care of CNS T Langdon with support from R Bowen and M Beresford when required.

BHOC: A low grade CNS has been appointed and a meeting is planned with RUH to define how to manage the oncology workload. As an interim measure, Consultant Oncologist K Falconer is providing support, although this is not included in her job plan.

The team in Cheltenham are happy to provide support if numbers become unmanageable.

Action: A protocol for monitoring of bloods post treatment in local areas will be developed to address inequities in Somerset. **S Levy/L Hawley**

-END-