Report on the configuration of surgical services in Anglia for patients with colorectal liver metastases.

Commissioned by National Cancer Action Team for Anglia Cancer Network

Cambridge visit 26th April, Norwich visit 27th April 2012

Inspection Team

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Remit of visit.

The Anglia cancer network (population 2.9 million) produced a service specification for the reconfiguration of surgical services for treatment of colorectal cancer liver metastases. This specification has been developed in line with the improving outcome guidance (IOG) on colorectal cancer and upper gastrointestinal cancers of the National Cancer Plan (2000), and the accepted recommendations of the Association of Upper Gastrointestinal Surgeons on provision of services for upper GI surgery and surgeon/institutional volumes and workload, Appendix 2, 3.

The service specification was provided to all Institutions in the network who were undertaking liver surgery for colorectal cancer metastases on 30th September 2011. The provider Institutions were requested to submit proposals for providing a service for the Network by 31st December 2011. The aim of the service change is to;

- Provide an optimal service for patients requiring surgery for colorectal cancer liver metastases in the Anglia Cancer network.
- Improve access to liver metastatectomy: currently the numbers performed within the network are lower than those expected from national comparators.
- Commission a service which is both sustainable and of the highest quality.

Currently liver surgery services to the network are provided by five Hospitals, two of which within the network have made an expression of interest in providing a network wide service in line with the service specification. However, there have been significant challenges from both within and outside the network to the IOG compliant network-wide service model.

In response to this situation, the service commissioners (East of England Specialised Commissioning Group) consulted the National Cancer Action Team as to the acceptability of possible models of service provision (specifically surgery performed at one or more than one site). The National Cancer Action Team agreed to commission a report from clinical experts to advise NCAT and the Network on the future service configuration. This report will address the aims of these service changes and will advise on:

- What the service should look like?
- Which organisation(s) are best placed to deliver the service?
- What should the expectations be for the reconfigured service?

The Inspection Team Visit.

The visit took place on 26 and 27th April, in Cambridge and Norwich. Appendix 1 lists the staff interviewed. The information packs received from both centres are enclosed (Appendices 4 and 5), in addition to the CVs of the consultant surgeons (Appendices 6 and 7). The Norwich team subsequently submitted a Business Case for a single site service and their Operational Policy for Liver Cancer on 16th May (Appendices 8 and 9).

Current situation for patients with resectable colorectal liver metastases.

The Anglia Cancer Network covers a population of 2.9m. Patients from Bedford, population 300,000, are currently referred to Basingstoke and patients from Peterborough, population 165,000, are referred to Leicester. Currently Cambridge and Norwich cover the populations shown below. Resection rates are also shown below in Table 1.

Ipswich currently has its own liver resection Unit covering a population of 300,000, which is completely outside the terms of the IOG (which is accepted by the Ipswich team). There is a proposed plan for the surgical team and patient population from Ipswich to join with Norwich, and the data shown for Norwich therefore includes the Ipswich data.

Table 1: Population and resection rate data.

	Cambridge University Hospital Foundation Trust (CUHFT)	Norfolk &Norwich University Hospital Foundation Trust (NNUHFT)
Population covered	1.2m	1.1m, (1.4m with Ipswich)
Centres referring	Cambridge Hinchingbrook hospital Huntingdon, Queen Elizabeth Hospital Kings Lynn, West Suffolk Hospital Bury St Edmunds	Norwich, James Paget Hospital Great Yarmouth Queen Elizabeth Hospital Kings Lynn, (Ipswich)
No of resections for CRLM	Approx 40 per year	Approx 20 per year, (with Ipswich)
Expected resections per year	Approx 100	Approx 100

Current activity for both centres.

Table 2: Clinical data from both centres.

	Cambridge	Norwich
Current resections per year for CRLM	40	20
5 year survival	42%	40%
Morbidity	26%	19.5%
Mortality	1.6%	2.9%

The data above shows that both centres have acceptable outcome data.

The Inspection Team visited the MDTs at both centres. Both centres used video linked discussions with referring hospitals. This seemed to work effectively.

The core team required for a colorectal cancer liver resection MDT was available at both sites based on the MDT attended by the inspection team.

Manpower.

Table 3: Existing staffing levels at centres.

	Cambridge	Norwich
Hepatobiliary Surgeons	4.6	1 + 0.2 + 0.1 + (Ipswich surgeon)
HB Consultant Rota	100%	No formal rota
Middle grade surgeons	4	2
Middle grade rota	Not complete	No
Specialist nurse	2	1
MDT Coordinator	1	0.25
Oncology consultants	5	1
Pathology consultants	2	1

Radiology consultants	5	4
Interventional radiology consultants	5	5
ERCP sessions	4	3

Surgical activity and team expertise.

Cambridge currently provides a regional service for primary liver tumours and a supra regional service for liver transplantation. Approximately 60 liver resections for primary liver tumours per year take place in Cambridge, which while disproportionally high compared to 40 CRLM resections in 2011, reflects their NSCAG designation as 1 of 6 liver transplant centres in England. Cambridge is referred a larger numbers of patients with primary liver tumours with background chronic liver disease from within the whole cancer network.

The Inspection Team saw evidence of an existing on-call rota for the Hepatobiliary surgeons to cover the existing Hepatobiliary Surgical Service (Table 3). Cambridge has 5 HPB surgeons with one part time University of Cambridge academic surgeon. These surgeons are compliant with AUGIS recommendations on surgeon and centre volume of activity.

The members of the liver resectional surgery team in Cambridge have all undertaken the minimum training required in Hepatobiliary surgery that the Inspection Team would regard as appropriate for short listing for interview when applying for an advertised position as a consultant Hepatobiliary surgeon in the NHS, see CVs enclosed (Appendix 6). Cambridge has a number of HPB registrars and fellows, but is unable to provide full time cover of the HPB patients at middle grade level.

One of the surgeons in Norwich, Surgeon A, is a full time HPB surgeon and is compliant within AUGIS recommendations on surgeon activity. Surgeon B comes across from another Trust one day a week and operates one session every two weeks, and a third surgeon, surgeon C, performs predominantly oesophagogastric surgery. There is a proposal for Surgeon D to move over from Ipswich to operate in Norwich. CVs enclosed (Appendix 7).

Comparison and plans for providing Single Site Service.

a) Plans for expansion of service in Cambridge.

Table 4 shows that Cambridge plan to increase their HPB Consultant surgeon numbers to 7 and increase the numbers of other staff, such as CNS support and pathology technician. An additional operating theatre is already being built in anticipation of delivering this increased activity. These intentions were underpinned by a detailed Business case which was presented to the Inspection Team with the support of the Chief Executive (see Appendix 3).

Table 4: Planned expansion in Cambridge.

	Cambridge
Theatres	1 extra
HPB Consultant Surgeons	2 new
CNS administration staff	1new
Pathology technical staff	1new

b) Plans for expansion of service in Norwich.

Norwich did not produce a business case at the time of the Visit and so discussions related to this issue were limited. However a Business case has subsequently been submitted to the Inspection Team on 16th May (Appendix 8). NNUH Trust plan to implement a 6 day elective theatre service which would allow extra capacity for the increased number of liver resections. These plans would include opening an extra ICU/HDU bed and making Gissing ward exclusively for UGI and HPB patients. The staff increases are shown in Table 5 below.

Table 5: Planned expansion of staffing in Norwich.

Key Posts	**WTE**
Interventional Radiologist	0.15 wte
Histopathologist	0.1 wte
Oncologist	0.1 wte
Anaesthetist	0.7 wte
Specialist Nurse	0.5 wte
MDT co-ordinator	0.5 wte
Theatre staff	5 wte
Critical Care Nurses	4 wte
Surgeon	0.5 wte

Patient Trials and Academic research.

The Inspection Team noted that the Cambridge Team are actively recruiting into NCRI sponsored trials for patients with colorectal cancer liver metastases, with the support of the Cancer Centre at Addenbrookes, and the input of the academic members of the oncology team from the University of Cambridge. To date 13 patients had been entered into the FOXFIRE study and 3 patients into the New EPOC study.

There was also evidence of significant academic research in HPB surgery taking place in Cambridge, with presentations from registrars undertaking Doctorate and Post-doctorate research.

Norwich has not entered any patients into Hepatobiliary CRLM trials, nor was there evidence of any active ongoing research (basic science or clinical) in this field.

Preferred service configuration for Anglia.

The Inspection Team advises the Network that it is convinced by the argument to centralise complex Hepatobiliary cancer services in line with the Improving Outcomes Guidance of the National Cancer Plan. In our view as an expert team there is strong and compelling evidence to support the principle that high volume centres produce better short and long term outcomes than low volume centres. Whilst both centres do have acceptable outcome data, both centres are under performing with respect to expected volumes of activity. The precise reasons for this are not clear and are probably multifactoral. However the outcome data may reflect a selection bias with only the most straightforward cases being put forward for surgery. Furthermore the multiple patient pathways that exist in the network which are not sustainable in the long term and are likely to have had a detrimental impact on the local level of performance.

The Inspection Team considered the following Options:

1. Service delivery at two separate centres within the Network (NNUHFT and CUHFT) and provision of service outside the Network for Peterborough and Bedford residents.

2. Two network sites of surgical activity (NNUHFT and CUHFT) but working under the umbrella of a joint and unified SMDT.

3. Designate one centre within the Network (either NNUHFT or CUHFT) as the sole Network provider (while recognising the possibility of ongoing referrals outside the Network from Peterborough and Bedford *pro tem*).

4. Designate one or possibly two centres outside the Network as the provider of this service for East Anglia Network residents, and not reimburse this activity in either NNUHFT or CUHFT.

Although the travel distance for patients in East Anglia was noted to be an issue, the level of road and rail communication was believed to be satisfactory (and no different to those posed to similar patients in other parts of England). As in most networks the majority of investigations and treatment, other than major surgery, can be provided by local teams.

For the reasons stated above, the Inspection Team believes that neither Option 1 or 2 is sustainable or desirable in the long term. Neither model is compliant with improving outcome guidance, the team did not find any compelling reasons not to support a compliant service and developing a compliant service was felt most likely to deliver the service capable of delivering increased access to, and the highest quality of surgery. To continue with anything relating to the status quo will be to the continuing detriment of Anglia cancer patients. Considering the geography of Anglia, and the distances required to travel to alternative centres , the Inspection Team have

concluded that Option 4 is not sustainable (bearing in mind that the capacity to deliver a unified single site service already exists in Anglia).

Based on the two site visits and assessing the region, its geography and its population, the Inspection Team advises the Network that one site, serving the Network population of potentially 2.9m, is the preferred service configuration. This outcome would comply with the nationally accepted IOG of the National Cancer Plan, AUGIS Guidance on Minimum Surgeon Volumes 2010,(Appendix 2) and AUGIS Provision of Services document 2011 (Appendix 3).

Basic Staff and resources required are based on a predicted output of up to 200 liver resections for metastatic colorectal cancer per year, delivered by an appropriate number of trained Hepatobiliary surgeons working as a team, and evenly distributing the workload among the surgical team.

Requirements for the unified Anglia Cancer Network liver surgical team.

5-7 Full time Hepatobiliary Consultant surgeons.

3-4 CNSs.

24/7 HPB trainee cover of wards.

Dedicated ward and theatre. 150-200 resections for CRC mets is a daily HPB theatre for the service (5 days x 40 weeks for NHS year).

2 full time MDT co-ordinators with appropriate cover.

Dedicated HPB management team and secretarial support, including database manager and audit support.

The Anglia Cancer network service specification should be amended to reflect these requirements.

Recommendation of the Inspection Team.

Despite the concerns expressed above regarding relative underactivity at both centres, the Inspection Team recognises that both centres are currently providing a service for patients requiring surgery for colorectal liver metastases. The Team also acknowledges the interest and enthusiasm in both centres to continue as a resection unit. The ultimate decision as to which centre best meets the specification and which would provide optimum outcomes for patients is a matter for due process and local determination.

However in the opinion of the Inspection Team CUHFT has some inherent advantages in that it:

- Is undertaking at least twice the liver resectional surgery activity of Norwich.
- Provides a service that has an appropriate number of Hepatobiliary surgeons who have completed appropriate training in Hepatobiliary surgery to the level required for successful short-listing for interview to a vacant NHS hepatobiliary consultant surgeon position.
- Have a track record in recruitment to clinical trials and involvement in academic oncology.

  The inspection team recognise that considerable surgical expertise is available at NNUHFT which ideally should continue to participate in a network wide service if the ultimate decision of the Specialist Commisioning Group was to designate CUHFT.

Summary Statement.

The numbers of resections for colorectal liver metastases as a percentage of the incidence of colorectal cancer in Anglia are below that seen in the rest of England, and therefore there are patients in Anglia who are not being considered for potentially life-saving surgery. Currently there are two providers of this service and neither are IOG compliant. A single Unit providing this service would be IOG compliant, but would need to increase the resection rate to 150-200 cases per year based on a population of 2.4 -2.9m.

Communication must improve between the liver resection centre and the referring units, with regular visits from the Liver MDT surgeons to the referring Hospitals. This action will increase the number of patients referred for potentially life-saving surgery. Significant expansion in infrastructure and staffing will be required at the site of choice to provide patients with timely and high quality treatment, and such plans are already well advanced at Cambridge.

The Inspection Team believes there should be a single site for colorectal liver metastasis resection in Anglia, and Cambridge is better placed to provide this service.

Appendix 1

Team members met in Cambridge

Consultant Surgeons

Raaj Praseedom

Emmanuel Huguet

Neville Jamieson

Asif Jah

Paul Gibbs

Oncologists

Charles Wilson

Hugo Ward, Divisional Director of Oncology

Daniel Patterson, West Suffolk

Medical Director

Jag Ahluwalia

Clinical Director

Richard Miller

Pathology Consultants

Susan Davies

Rebecca Brais

Trainees

Siong-seng Liau

Anita Balakrishnan

Transplant Consultant Surgeons

Andrew Bradley

Chris Watson

Hepatology Consultant

Graham Alexander

Scientists

Duncan Odom

Radiology Consultants

Siobhan Whitley

Sara Upponi

Business Manager

Emma Glover

Chief Executive

Gareth Goodier

Associate Director for Operations Cancer

Liz Hunt

The Inspection team attended:

CRLM MDT. Video links with Kings Lynn, West Suffolk and Huntingdon

Scientific presentations

Met with Chairman of the Trust, Chief Executive, Medical Director and patient advocates

Team members interviewed in Norwich

Consultant Surgeons

Simon Wemyss Holden

Michael Lewis

Martin Sinclair

Sathesh Kumar

Lead Clinician for Colorectal Services

James Hernon

Oncologist

Debashis Biswas

Patient Advocate

Alan Stephens

Hepatology Consultants

Martin Phillips

Simon Rushbrook

Radiology Consultants

Benedict Simpson

Michael Crawford

Histopathology Consultant

Laszlo Igali

CNSs

Maria Cremin

Jane McColloch

MDT Coordinator

Sonia Baker

Medical Director and Chief Executive

Krishna Sethia and Anna Dugdale

The Inspection Team Attended:

Liver MDT, Video links with Ipswich and James Padgett

Appendix 2 AUGIS Guidance on Minimum Surgeon Volumes Document. *British Journal of Surgery 2011, 98(7), 891-3.*

Appendix 3 AUGIS Provision of Service Document

Appendix 4 Cambridge Information Pack

Appendix 5 Norwich Information Pack

Appendix 6 Cambridge Surgeon CVs

Appendix 7 Norwich and Ipswich CVs

Appendix 8 Proposal to provide a centralised service for Anglia Cancer Network at Norwich and Norfolk Hospital.