

AUGIS HPB cancer resection audit

Mr David P Berry

Consultant HPB Surgeon, University Hospitals Leicester
Chair AUGIS Audit committee

London UK
November 2010

Data collection

- Should / can we collect national resection data?
- Which data items to collect?
- Need / establish a facility to collect secure and anonymous data from multiple sites in real time (who will collect it?)
- What to do with the data?
 - What about those who do not collect data / are 'outliers'?

Should we collect data?



- **Dr Ernest A Codman (1869-1940)**

- ‘End results system’ (Sir Thomas Percival 1740-1804)

- 1914 departed Mass. General / Harvard Med Sch. as refused plans for evaluating surgeons competence.

- ‘I am called eccentric for saying in public that Hospitals must find out what their results are, analyse these results and compare them with other hospitals.....such opinions will not be eccentric in a few years’

- **Cancer Reform Strategy (2007, 2008)**

- ‘collecting and using improved information is central to delivering this strategy’

- ‘collect defined datasets of clinical outcomes’

- (NCIN – Hospital Episode Statistics [HES] based)

- ‘access to clinically effective and cost effective treatment’ implies audit

- ‘optimising data collection to reduce inequalities’

Should we collect data?

- **Cancer Peer review** – audit integral part of MDT and NSSG measures
- **Darzi: Next Stage Review (2008)** – ‘establishing a clear framework and standard ways to measure results will allow us to demonstrate the high quality.....’
- **Bruce Keogh** (Medical Director NHS) – presentation to DoH – ‘measuring and monitoring clinical outcomes for all patients’
- Designation of Specialist services by **Specialised Commissioning Groups**
- **GMC / Academy of the Royal Colleges (2009)**- Revalidation and recertification - Audit as central to the process – ‘input to National audits where they exist’

AUGIS

The Association of Upper Gastro-Intestinal Surgeons

AUGIS HPB Cancer resection database

<http://nww.hpbaudit.nhs.uk>

- 2007 DPB, Prof John Buckels, Mr Iain Cameron
- Tom Palser, Mr Richard Hardwick, Mr Merv Rees
- Cancer resections only (resources and OG audit)
- Agree data fields
- Anonymous, secure, national data collection on-line (nhs.net)

AUGIS HPB Cancer resection database

<http://nww.hpbaudit.nhs.uk>

- Extensive literature review
 - Mann CD.....Berry DP HPB 2010; 12(6): 380-8
A review of factors predicting perioperative death and early outcome in hepatopancreaticobiliary cancer surgery
Liver – 9500 citations resulting in 63 papers, 25000 pts,
Pancreas – 7200 citations resulting in 68 papers, 68000 pts
 - Pre-op investigations
 - co-morbidities (important to allow risk adjustment)
 - Operation
 - Outcome
 - Pathology

Restrict fields to those which influence outcome in the literature

AUGIS HPB Cancer resection database

<http://nww.hpbaudit.nhs.uk>

- ~50 fields each for liver, biliary and pancreatic resection in click-box format
- Includes liver ablation database (international data entry)
- Develop on-line data collection in database which is surgeon specific - view own data only
- On-line support from Ardeo
- ? 2 stage data collection
 - Surgeon input for investigations, co-morbidity, operation
 - MDT input for outcome and pathology

Launched AUGIS meeting September 2009





AUGIS HPB Audit



Welcome to the AUGIS HPB cancer resection database.

This database has been developed to coordinate national data collection for HPB cancer resections and I am very grateful for the input and support provided by Professor John Buckels and Mr Iain Cameron. The datafields were agreed following an extensive literature review which identified those factors shown to influence outcome and only these datafields have been included in the dataset. The format is simple and is designed to be user friendly and it should only take a few minutes to complete the data entry.

Over time we hope to expand the dataset to include all HPB patients but currently I would encourage you to enter your cancer resection data so that we, as a professional body, take a lead in national data collection.

David Berry

Consultant HPB Surgeon & Chair of AUGIS Audit Committee

Peter Kuramapu

CEO (Ardeo)

George Kuramapu

Head of Projects - Director (Ardeo)

Login

Username

Password

Login

Need Helpline

Jill Cooke

Email jill.cooke@uhl-tr.nsh.uk

Tel 0116 2588376

Ardeo Plc

Email lad@ardeo.com

Tel +44 (0)870 909 4100

AUGIS
www.augis.org

Developed By:

ardeo
www.ardeo.com

Data Entry

Find Patient
Create Patient

Current Patient

Forename:
 Surname: 01
 Sex:
 Age: 0
 NHS No.: 0002

Patient Details
 Patient History
 Close Patient

Forms

--HPB Forms--
 Resection For Liver
 Resection For Pancreatic Cancer
 Resection For Biliary Cancer

HPB Audit
 Export for HPB Audit

Patient Details & Diagnosis / Staging

Hospital

Date Of Admission

Date Of Operation

Date Of Discharge

BMI

Diagnosis / Staging

Ultrasound yes no

CT yes no

MRI yes no

MRCP yes no

Laparoscopy +/- Intraoperative Ultrasound yes no

PET yes no

Tumour Markers & ECOG (WHO) Performance Status

CEA Normal Raised Not Done

Beta HCG Normal Raised Not Done

Alpha Fetoprotein Normal Raised Not Done

CA19-9 Normal Raised Not Done

ECOG (WHO) Performance Status

Performance Status 0-Fully active
 1-Light/office work
 2-Ambulatory/self care, up & about >50% of the time
 3-Limited self care, confined to bed/chair >50% waking hours
 4-Completely disabled

Comorbidities (please tick all that are appropriate)

Comorbidities None
 Cardiovascular disease
 Chronic renal impairment
 Cerebro/periph vascular
 Chronic respiratory disease(inc. COPD/asthma)
 Liver failure or cirrhosis
 Diabetes
 Mental illness
 Other significant condition

Cirrhosis-Childs Pugh A B C N/A

Portal hypertension yes no

Known hepatitis yes no

Preoperative Variables

Pre-operative chemotherapy yes no

Pre-operative chemoembolization yes no

Preoperative portal vein embolisation yes no

Preoperative jaundice and intervention
 Jaundice yes no

Duration (days)

Preoperative cholangitis yes no

Preoperative biliary drainage yes no

ERCP yes no

Antegrade stent yes no

PTC and drain yes no

Number of times attempted

Interval between jaundice and stenting (days)

Data Entry

Find Patient

Create Patient

Current Patient

Forename:

Surname: 01

Sex:

Age: 0

NHS No.: 0002

Patient Details

Patient History

Close Patient

Forms

--HPB Forms--

Resection For Liver

Resection For Pancreatic Cancer

Resection For Biliary Cancer

HPB Audit

Export for HPB Audit

Resection For Liver

Operation

Consultant Primary Operator Assistant

Trainee Primary Operator Assistant

Fitness for Surgery ASA grade 1 2 3 4 5

Number Of Tumours

Number of Involved Segments

Resection

Anatomical Resection Minor (<3 segments)

Major (3 or more segments)

Extended (>4 segments or equivalent-contiguous or non-contiguous)

Segmental Resection yes no

Total Number of Segments Resected

Local Resection yes no

Total Number of Local Resections

Surgical access(abdominal)-please indicate approach used for the operation

Open

Laparoscopic

Laparoscopic converted to open

Operation (page 2 of 3) Operation

Continued

Vascular resection - IVC/PV yes no

Additional extrahepatic procedure yes no

- (excluding cholecystectomy)

Pringle yes no

Pringle total time (mins)

Glue / Haemostat yes no

Operation Duration (mins)

Intraoperative Blood loss (mls)

Intraoperative blood transfusion - units

Total Blood Transfusion - Units

Operation Print Cancel Save

Data Entry

Find Patient

Create Patient

Current Patient

Forename:
Surname: 01
Sex:
Age: 0
NHS No.: 0002

Patient Details

Patient History

Close Patient

Forms

--HPB Forms--

Resection For Liver

Resection For Pancreatic

Cancer

Resection For Biliary Cancer

HPB Audit

Export for HPB Audit

Resection For Liver

Outcome Mortality And Morbidity And Post Op Pathology And Histology (page 3 of 3) Outcome Mortality An...

Outcome Mortality And Morbidity

Mortality

Date Of Death

In hospital Mortality

 yes no

30 Day Mortality

 yes no

60 Day Mortality

 yes no

90 Day Mortality

 yes no

Morbidity

Major Complications (Requires intervention/admit to ITU)

- None
 Bile leak
 Bleed
 Return to theatre
 Liver failure
 Percutaneous drainage of collection
 Anastomotic leak requiring return to theatre
 Other

Minor

 None Wound infection Chest infection Urinary infection

Post Op Pathology And Histology

Tumour Type

 Colorectal mets HCC Intrahepatic cholangiocarcinoma Other cancer

Other Cancer

 Breast Renal Neuroendocrine Other

Resection Type

 R0 R1

Chronic liver disease

 yes no

Steatosis

 yes no

Hepatitis

 yes no

Steatohepatitis

 yes no

Sinusoidal Obstruction

 yes no Largest tumour size (mm)

Outcome Mortality An... Print Cancel Save

International liver ablation database

<http://mta.emdt.net:8080/emdt/login.jsp>

- DPB, Miss Fenella Welsh
- Educational grant from Acculis
- Independent server
- On line data collection in click-box format
- Access for HPB resection data collection if nhs.net unavailable - identical datafields



AUGIS Liver Ablation Database



This is an international web-based facility for data collection and audit of the short-term outcomes of microwave ablation of liver tumours using the Acculis 2.45Ghz MTA system. This has been developed by Ardeo, a specialist software company, in conjunction with the UK Association of Upper Gastrointestinal Surgeons (AUGIS), facilitated by support from Microsulis Medical Ltd.

The aim of this database is to facilitate the evaluation of the safety and efficacy of microwave ablation of liver tumours and is designed to be user-friendly and so encourage data collection. At this stage the database is not designed to facilitate an in depth analysis of long-term patient outcomes.

We hope that you will find this database straightforward to use and look forward to receiving your data. Please do not hesitate to contact us using the links below, if you require further information.

David Berry

Consultant HPB Surgeon & Chair of AUGIS Audit Committee

Fenella Welsh

Consultant HPB Surgeon & Lead Collaborator

Peter Kuramapu

CEO (Ardeo)

George Kuramapu

Head Of Projects - Director (Ardeo)

LoginUsername Password **Need Helpline****Ardeo Plc**Email lad@ardeo.com

Tel +44 (0)870 909 4100

AUGIS
www.augis.org

 **Acculis**
www.acculis.com

Developed By:
 **ardeo**
www.ardeo.com

Data Entry

Find Patient
Create Patient

Current Patient

Sex:
Age: 0
Patient Id: LDS001

Patient Details
Patient History
Close Patient

Forms

--Ablation--
Resection/Ablation For Liver
Primary Tumour
Previous Liver Surgery
Operative Details
Follow Ups
Summary

Operative Details

During Ablation

DATE OF MICROWAVE ABLATION PROCEDURE

Indication

Ablation Type

Method of ablation

Ultrasound used for mapping liver disease no yes

Applicator Type

If yes, was ultrasound monitoring adequate no yes

Lesion Number	Site	Diameter (mm)	Treatment	Margins	Treatment Comments	Power (Watt)	Duration (Minutes)	Number Of Treatments
1	<input type="text"/>							
2	<input type="text"/>							
3	<input type="text"/>							
4	<input type="text"/>							
5	<input type="text"/>							
6	<input type="text"/>							
7	<input type="text"/>							
8	<input type="text"/>							
9	<input type="text"/>							

Operative Details

Were liver lesions in accordance with per-operative imaging no yes

If more tumours were found please indicate number of additional metastases

Extra-hepatic disease at time of laparotomy or laparoscopy no yes

If yes, please specify where

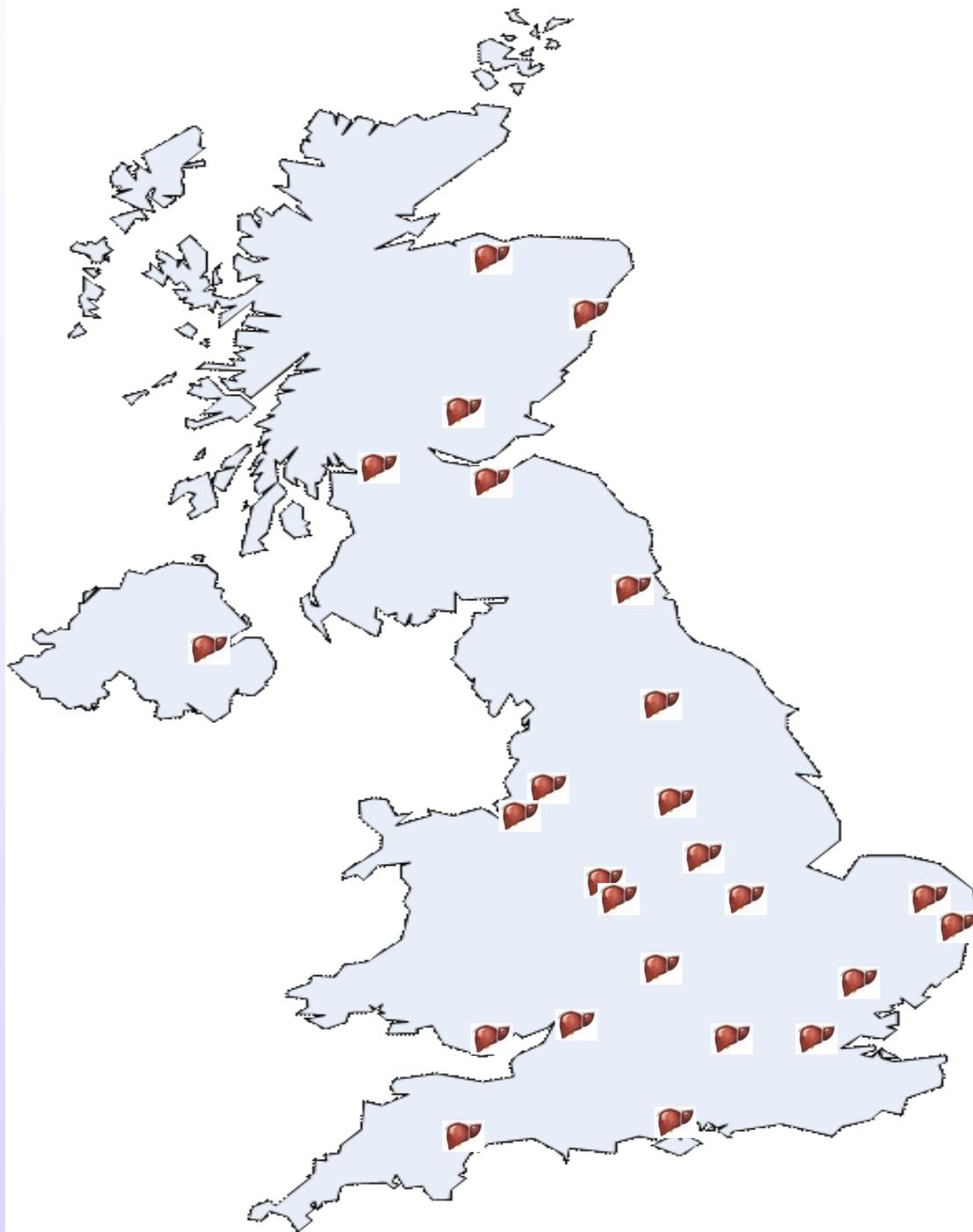
Treatment of extra-hepatic lesion(s) at time of surgery no treatment resection other

Total ablation time (minutes)

Operative Details Print Cancel Save

HPB Units in UK

- Basingstoke
- Birmingham
- Blackburn
- Bristol
- Cambridge
- Coventry
- Ipswich
- Leeds
- Leicester
- Liverpool 2 centres
- London 5 centres
- Manchester 2 centres
- Newcastle
- Norwich
- Nottingham
- Oxford
- Plymouth
- Sheffield
- Southampton
- Stoke
- Aberdeen
- Dundee
- Edinburgh
- Glasgow
- Cardiff
- Swansea
- Belfast



Results - September 2010 (1 year)

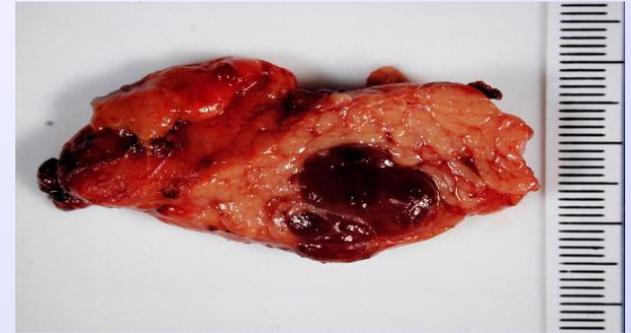
- Estimate 2,500 HPB cancer resections per year
- Total of 741 patients entered on database
- Liver = 481, pancreas 228, biliary tract 32
- Some centres excellent recruitment – all resection patients entered
- Some centres surgeon specific

Liver resection data



- 481 cases to date
- 10 centres have entered data
- 316 cases Birmingham, Basingstoke and Leicester
- Bristol, Royal Free, Nottingham, Leeds
- 17 centres - no patients

Pancreatic cancer resections



- 228 cases to date
- 12 centres entered data
- 152 cases Birmingham, Royal Liverpool and Royal Free
- Bristol, Ipswich, Edinburgh, Leicester
- 15 centres - no patients

Future work

- Additional follow up data - date of recurrence, planned curative or palliative treatment, outcome, date of death
- Link with HES data and coding
- Non-recruiting centres – most / all HPB units have local database - double data entry – CSV file to individual trusts

Future work

- Use of data
 - Individual surgeon use for revalidation – link to college logbook
 - AUGIS use of data – benchmarks
 - Data requests from Commissioners and individual trusts.

- Long term funding



Audits from USA, Europe and UK

	LiverMet Survey	Johns Hopkins	MSKCC	BAUS	ACP	AUGIS
Sites / clinicians	240/394 Intern.	1/8 Institution	1/16 Institution	? Nat	?/200 Nat	20/60 Nat/Intl
Online	Y	N	N	Y	N	Y
Start	2005	1990	1991	2009	2002	Sept 2009
No pts	>10,500	>10,000	>13,600	-	10,000	>950
Preop	Y	Y	N	variable	variable	Y
Co-morb	N	Y	Y			Y
Operation	Y	Y	Y			Y
Outcome	Y	Y	Y			Y
Pathology	Y	Y	Y			Y
Data entry	Clin	Clin	admin	Clin	admin	Clin
Data fields	110	150-200	variable	-	-	50

Summary

- Should / can we collect national resection data?
YES – little option in the future – promising first year!
- Which data items to collect?
As per literature review
- Need / establish a facility to collect secure and anonymous data from multiple sites in real time (who will collect it?)
AUGIS HPB cancer resection database and ablation database (relies on clinicians at present)
- What to do with the data?
 - What about those who do not collect data / are ‘outliers’?
Make the process as easy as possible. ‘outliers’ ?

Summary / Conclusions

- Encourage prospective data collection
- Simple, quick (<5 minutes per patient)
- Clinician / nominated individual

<http://nww.hpbaudit.nhs>

david.berry@uhl-tr.nhs.uk

The logo for AUGIS, featuring the letters 'AUGIS' in a large, bold, blue, sans-serif font. The letters have a slight 3D effect with a lighter blue shadow on the right side.

The Association of Upper Gastro-Intestinal Surgeons