

AUGIS HPB cancer resection audit

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Chair AUGIS Audit committee

London UK
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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://nwww.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://nwww.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://nwww.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




Ardeo eMDT Login - Mozilla Firefox

File Edit View History Bookmarks Tools Help


← → ↺ × 🏠 📄

→ - 🔍 Google 🔍

Stand Alone eMDT Lo...



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

Resection For Liver

Page 1 (page 1 of 3) Page 1

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
CancerResection 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)

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: LDS001Patient Details
Patient History
Close Patient

Forms

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

Operative Details

Operative Details (page 1 of 1) 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"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<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

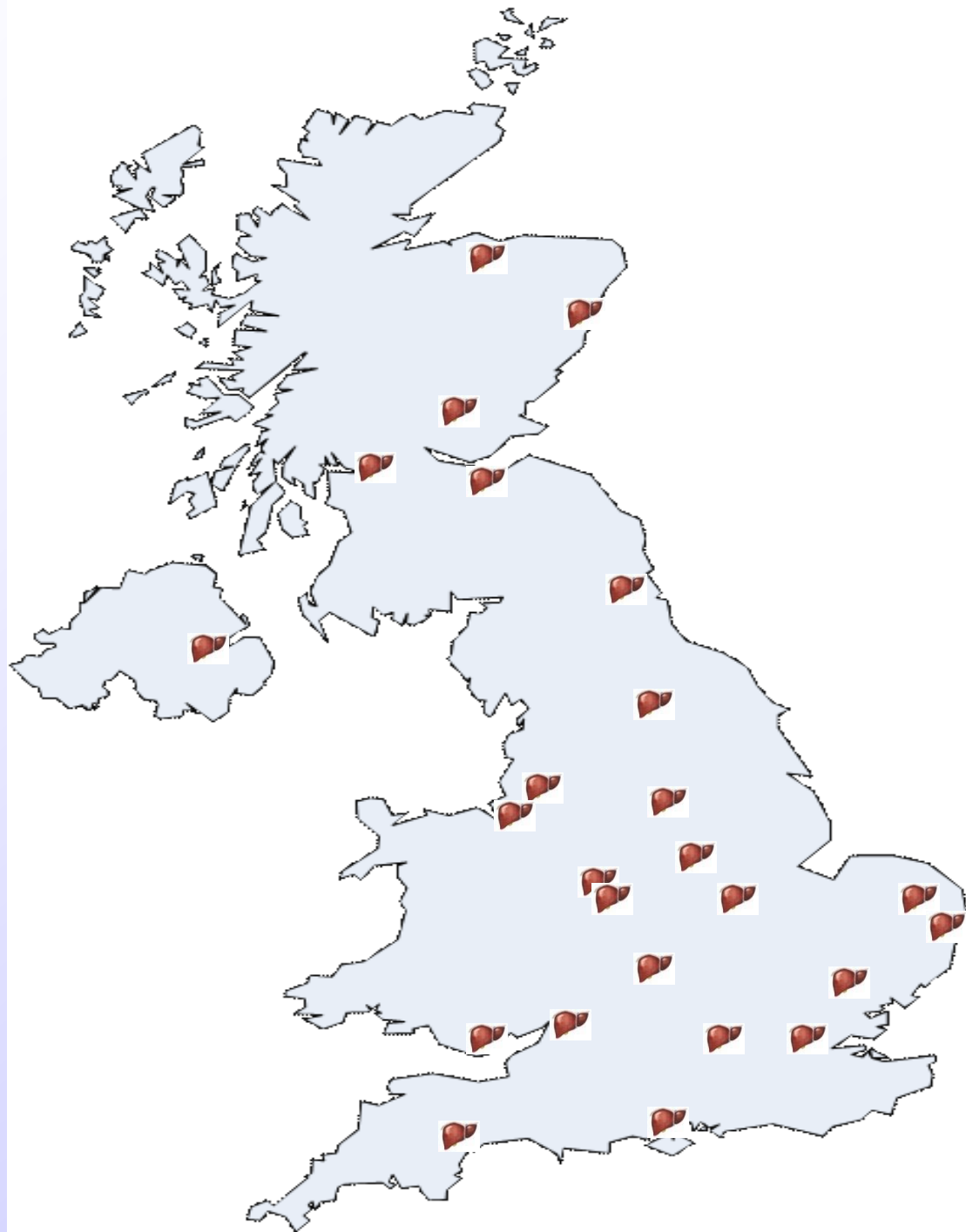
Treatment of extra-hepatic lesion(s) at time of surgery ☐ no treatment ☐ resection ☐ other

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)

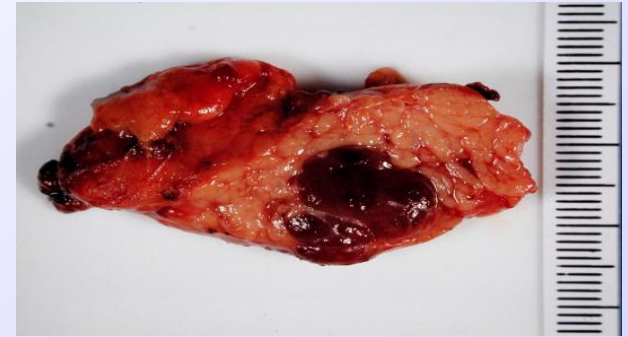
- Estimate 2,500 HPB cancer resections per year
- Total of 741 patients entered on database
- Liver = 481, pancreas 228, biliary tract 32
- Some centres excellent recruitment – all resection patients entered
- Some centres surgeon specific

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 word "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