



Use with Appendix B (Dat	Report For							REDCap unique ID													
	a Dictionary) to help data collection. Section 1: Pre-operative data fields							Data collection period													
Age	Sex 🗆	M DF	ASA			BMI		Frailty	-1-2-	3-4-5-	_6_7_8_										
Age						i	 חווי	Trait,		504050											
Comorbidities (Tick <u>all</u> that apply)	□ MI □ CHF □ PVD □ CVA/TIA □ Dementia □ COPD □ Hemiplegia □ Leukaemia □ Lymphoma □ HIV/AIDS □ H								ute cholecy	e cholecystitis or											
	Diabetes mellitus 🛛 🗆 Diet-controlled 🗆 Non-insulin 🗆 Insu							History of acute cholecystitis or cholangitis			🗆 Yes 🗆 N										
	Solid tumour 🛛 Localised 🗆 Metastat																				
	Liver dise	Liver disease					Caucana			4h h:l:											
	CKD						Number of			admissions with biliary in previous 12 months											
								prior to surgery													
					icated ⊓ No -	- patient declined 🗆 Unknown															
Descusation	USS: □ Yes □ No - not available □ No - not indicated □ No CT: □ Yes □ No: not available □ No: not indicated □ No:																				
Preoperative imaging						patient decline															
(Tick <u>all</u> that apply)		ERCP: 🗆 Yes 🗆 No: not available 🗆 No: not indicated 🗆 No: patient declined 🗆 Unknown																			
		EUS: □ Yes □ No: not available □ No: not indicated □ No: patient declined □ Unknown HIDA: □ Yes □ No: not available □ No: not indicated □ No: patient declined □ Unknown																			
Imaging findings	🗆 Ga	allstones r			lder 🗆 Perichole						n (1dp))										
	First s	symptom	onset and	admission:	1	Irgency															
Days between	-			o operate: _	0	Urgency □ Elective □ Delayed of surgery □ Emergency (patient was on elective waiting list? □ Yes □ N															
	•			surgery: _		• •	-	· · ·		· · · · ·											
Indication for	E				Tokyo grade: □ us cholecystitis						No)										
surgery	🗆 Gall					nta criteria doci			es □ No)												
					ion 2: Intraoper						,										
					aneous 🗆 Intra					n Yes - I	Prophylactic										
Mode of		🗆 Regi	ional (Rou t	•	elated □ regiona	al nerve blo	ock)	Intrao			tra-op spillag										
anaesthesia (Tick all that apply)	General	inhaled (1	vne: 🗆 sev		dation nalothane □ des	flurane 🗆 N	l20 □ isoflura	antik	oiotics	□ Yes -	cholecystitis										
(There and that apply)		Innaicu (I			Volatile Anaes					[⊐ No										
					ecialty: 🗆 Gener)										
Primary operator	🗆 Surgical trainee (Grade: 🗆 Senior 🗆 Junior; Training operation? 🗆 Yes 🗆 No; Consultant present? 🗆 Yes 🗆 No)																				
, ,	Numł	per of cho	lecvstecto	mies nerfor	med by primary	□ Non-sui		rocedure: □ 0-5	0 □ 51-100	0 - 101-200	0 □ >200										
					n not trained in																
Operative	Open cor	nversion (Why? 🗆 Si	uboptimal vi	ew 🗆 Adhesions	s 🗆 Unable	to safely disse	ect CVS 🗆 Susp	ected BDI	Pneumop	eritoneum no										
approach	tolerate										□ Open conversion (Why? □ Suboptimal view □ Adhesions □ Unable to safely dissect CVS □ Suspected BDI □ Pneumoperitoneum not tolerated □ Bleeding □ Bowel injury □ Equipment failure □ Suspected or actual cholecystoduodenal or cholecystocolonic fistula										
				□ Laparoscopic (Type : □ Standard □ SILS; Gasless? □ Yes □ No; Reusable equipment : □ Yes □ No) □ Robotic (Type : □ Standard □ SILS; Gasless? □ Yes □ No; Reusable equipment : □ Yes □ No)																	
				$(\mathbf{I}\mathbf{v}\mathbf{D}\mathbf{e}) + \mathbf{S}\mathbf{i}$	andard 🗆 SILS: (Gasless? □ \	∕es ⊓ No: Re ι														
Intropporativo					andard 🗆 SILS; (Gasless?															
Intraoperative difficulty (Nassar)		CVS	obtained		If No, which cr	□ Yes □ i teria was n	No n et? (Tick <u>all</u> t l	usable equipme hat apply)	nt: 🗆 Yes 🗆	No)											
		CVS succe			If No, which cri □ Clearance	□ Yes □ i teria was n e of the hep	No n et? (Tick <u>all</u> tl patocystic tria	usable equipme hat apply) angle	nt: 🗆 Yes 🗆 Was		□ Yes □ N										
difficulty (Nassar) – for minimally invasive		CVS succe for n	obtained essfully? – ninimally vasive		If No, which cri □ Clearance □ Exposu	□ Yes □ iteria was n e of the hep re of the lo	No net? (Tick <u>all</u> tl patocystic tria wer cystic pla	usable equipme hat apply) angle ate	nt: 🗆 Yes 🗆 Was time	No) s there a	□ Yes □ N										
difficulty (Nassar) – for minimally		CVS succe for n	obtained ssfully? – ninimally		If No, which cri □ Clearance □ Exposu Dnly two struct	□ Yes □ iteria was n e of the hep re of the lo	No net? (Tick <u>all</u> tl patocystic tria wer cystic pla cached to the	usable equipme hat apply) angle ate	nt: 🗆 Yes 🗆 Was time	No) there a e-out to	□ Yes □ N										
difficulty (Nassar) – for minimally invasive technique	□ IV □ V □ Total cho	CVS succe for n in tec	obtained essfully? – ninimally vasive chnique omy (Type	□ (: □ Standarc	If No, which cri Clearance Exposu Dnly two struct Unip two struct	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach)	No net? (Tick <u>all</u> the patocystic tria wer cystic plat cached to the e above	usable equipme hat apply) angle ate gallbladder	nt: □ Yes □ Was time veri Ana	No) s there a e-out to fy CVS?											
difficulty (Nassar) – for minimally invasive	□ IV □ V □ Total cho □ Subtotal	I CVS succe for n in tec	obtained essfully? – ninimally vasive chnique omy (Type tectomy (T	□ (: □ Standarc 'ype : □ Reco	If No, which cri □ Clearance □ Exposu Only two struct □ □ Fundus-first nstituting □ Fer	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated)	No net? (Tick <u>all</u> tl patocystic tria wer cystic pla cached to the	usable equipme hat apply) ingle ate gallbladder	nt: _ Yes _ Was time veri	No) there a e-out to											
difficulty (Nassar) – for minimally invasive technique Operation	□ IV □ V □ Total cho □ Subtotal □ Not per	CVS succe for n in tec ilecystecto cholecyst rformed (i	obtained essfully? – ninimally vasive chnique omy (Type tectomy (T Diagnos	□ C : □ Standarc 'ype : □ Reco tic laparosco	If No, which cri Clearance Exposu Dnly two struct I I Fundus-first Instituting I Fer py I Cholecyst	□ Yes □ iteria was n e of the hep re of the loo ures are att None of th approach) nestrated) costomy)	No net? (Tick <u>all</u> th batocystic tria wer cystic pla cached to the e above Abdomina drain	usable equipme hat apply) angle gallbladder al	ent: 🗆 Yes 🗆 Was time veri 0 Ana biliar	No) s there a e-out to fy CVS? atomical y variant	□ Yes □ N										
difficulty (Nassar) – for minimally invasive technique Operation	□ IV □ V □ Total cho □ Subtotal □ Not per	CVS succe for n in tec ilecystecto cholecyst rformed (i	obtained essfully? – ninimally vasive chnique omy (Type tectomy (T Diagnos	□ C : □ Standarc 'ype : □ Reco tic laparosco	If No, which cri □ Clearance □ Exposu Only two struct □ □ Fundus-first nstituting □ Fer	□ Yes □ iteria was n e of the hep re of the loo ures are att None of th approach) nestrated) costomy)	No net? (Tick <u>all</u> th batocystic tria wer cystic pla cached to the e above Abdomina drain	usable equipme hat apply) angle gallbladder al	ent: 🗆 Yes 🗆 Was time veri 0 Ana biliar	No) s there a e-out to fy CVS? atomical y variant	□ Yes □ N										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment	□ IV □ V □ Total cho □ Subtotal □ Not per □ II Decis	I CVS succe for n in tec blecystecto cholecyst rformed (i ntraopera	obtained essfully? – ninimally vasive chnique omy (Type tectomy (T Diagnos ative chola ective 🗆 R	□ C : □ Standarc (ype: □ Reco tic laparosco ngiogram □ outine; If se	If No, which cri Clearance Exposu Dnly two struct I I Fundus-first Instituting Fero py Cholecyst Incisionless fluct Incisionless fluct	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) costomy) orescent ch on: □ Raise	No net? (Tick <u>all</u> th batocystic tria wer cystic platic cached to the e above Abdomina drain olangiography d LFT \Box BDI c	angle angle gallbladder al Pes D N y D Laparoscop	ent:	No) s there a e-out to fy CVS? ntomical y variant aoperative suggests CE	□ Yes □ N ERCP 3D stone										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative	□ IV □ V □ Total cho □ Subtotal □ Not per □ II Decis	I CVS succe for n in tec blecystecto cholecyst rformed (i ntraopera	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos ative chola ective _ R _ No stone	□ C : □ Standarc 'ype: □ Reco tic laparoscc ngiogram □ outine; If se e; If stone, n	If No, which cri Clearance Exposu Dnly two struct I I Fundus-first Instituting Fero py Cholecyst Incisionless fluct Incisionless fluct In	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) orescent ch on: □ Raise Flushing wi	No net? (Tick all the patocystic tria wer cystic plate cached to the e above Abdomina drain olangiography d LFT \Box BDI co ith saline and	angle angle angle gallbladder al Pres D y D Laparoscop concern D Pre-c smooth muscle	ent:	No) s there a e-out to fy CVS? ntomical y variant aoperative suggests CE	□ Yes □ N ERCP 3D stone										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment	IV IV IV ITOTAL CHO Subtotal Not per In Decis Findings:	I CVS succe for n in tec cholecystecto cholecyst rformed (r ntraopera ion: \Box Selo	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos Diagnos tive chola ective \Box R No stone \Box Ba	□ (If No, which cri Clearance Exposu Dnly two struct Fundus-first nstituting = Fer py = Cholecyst Incisionless fluct lective, indication nanagement: = al = Choledocho	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) orescent ch on: □ Raise Flushing wi	No net? (Tick all the patocystic tria wer cystic plate cached to the e above Abdomina drain olangiography d LFT \Box BDI co ith saline and	angle angle angle gallbladder al Pres D y D Laparoscop concern D Pre-c smooth muscle	ent:	No) s there a e-out to fy CVS? ntomical y variant aoperative suggests CE	3D stone										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply)	IV UV IV VV Iv v Iv v	CVS succe for n in tec cholecystecto cholecy	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos tive chola ective = R No stone Ba: Trancystic	□ C □ Standarc ype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc	If No, which cri Clearance Exposu Only two struct I Fundus-first nstituting Fer py Cholecyst Incisionless fluct lective, indication nanagement: D al Choledocho hotomy;	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) tostomy) orescent ch on: □ Raise Flushing wi lescope □ 1	No net? (Tick all the patocystic tria wer cystic plate cached to the e above Abdomina drain olangiography d LFT \Box BDI co ith saline and	Al Pre-construction of the second sec	ent:	No) s there a e-out to fy CVS? ntomical y variant aoperative Fogarty ca	□ Yes □ N ERCP 3D stone theter trawl										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment	IV UV IV VV Iv v Iv v	CVS succe for n in tec cholecystecto cholecy	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos Diagnos tive chola ective = R No stone Ba Trancystic closure: =	□ C □ Standarc ype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc	If No, which cri Clearance Exposu Dnly two struct Fundus-first nstituting = Fer py = Cholecyst Incisionless fluct lective, indication nanagement: = al = Choledocho	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) rostomy) orescent ch on: □ Raise Flushing wi elescope □ 1	No net? (Tick all the patocystic tria wer cystic plate cached to the e above Abdomina drain olangiography d LFT	Al Pre-construction of the second sec	ent: □ Yes □ Was time veri 0 Ana biliar ic US □ Intra pp imaging s relaxant □ attempted Clean □ Clea	No) s there a e-out to fy CVS? ntomical y variant aoperative Fogarty ca	□ Yes □ N ERCP 3D stone theter trawl iinated										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration	IV UV IV VV Iv v Iv v	CVS succe for n in tec cholecystecto cholecy	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos tive chola ective = R No stone Ba: Trancystic	□ C □ Standarc ype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc	If No, which cri Clearance Exposu Dnly two struct I Fundus-first nstituting Fer py Cholecyst Incisionless fluct lective, indication nanagement: Data I Choledochoog hotomy;	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) rostomy) orescent ch on: □ Raise Flushing wi elescope □ 1	No net? (Tick <u>all</u> the batocystic trial wer cystic plate ached to the e above Abdomina drain olangiography d LFT \Box BDI of ith saline and No intraoperative	Al Pre-construction of the second sec	ent: □ Yes □ Was time veri 0 Ana biliar ic US □ Intra pp imaging s relaxant □ attempted Clean □ Clea	No) s there a e-out to fy CVS? atomical y variant aoperative suggests CE Fogarty ca an-Contam	□ Yes □ N ERCP 3D stone theter trawl iinated										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative	□ IV □ V □ Total cho □ Subtotal □ Not per □ II Decis Findings: □ Yes If Choledoc	CVS succe for n in tec elecystecto cholecyste formed (i ntraopera ion: Sele : Stone i chotomy, o	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos ative chola ective = R No stone Ba Trancystic closure: = No	□ C : □ Standarc ype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc Primary clos	If No, which cri Clearance Exposu Dnly two struct I Fundus-first nstituting Fero py Cholecyst Incisionless fluct lective, indication nanagement: Indication anagement: Indication hotomy; sure I T-tube)	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) costomy) orescent ch on: □ Raise Flushing wi blescope □ 1 Op cont	No net? (Tick all the batocystic tria wer cystic platached to the e above Abdomina drain olangiography d LFT BDI of ith saline and No intraopera perative amination	Al Prese Pre	ent: □ Yes □ Was time veri o ac US □ Intra pp imaging s relaxant □ attempted Clean □ Clea □ Contami	No) s there a e-out to fy CVS? atomical y variant aoperative Fogarty ca an-Contam inated \Box Di	□ Yes □ N ERCP 3D stone theter trawl inated irty										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration	IV UV IV VV Iv v Iv v	CVS succe for n in tec cholecystecto cholecy	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos' ative chola ective = R No stone Ba Trancystic closure: = No Spilt = Ble	□ C Standarc Sype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc Primary close eeding	If No, which cri Clearance Exposu Dnly two struct I Fundus-first nstituting Fer py Cholecyst Incisionless fluct lective, indication nanagement: Data I Choledochoog hotomy;	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) costomy) orescent ch on: □ Raise Flushing wi blescope □ 1 Op cont	No net? (Tick <u>all</u> th batocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT BDI of ith saline and No intraopera berative	Al Prese Pre	ent: □ Yes □ Was time veri 0 Ana biliar ic US □ Intra pp imaging s relaxant □ attempted Clean □ Clea	No) s there a e-out to fy CVS? atomical y variant aoperative Fogarty ca an-Contam inated \Box Di	□ Yes □ N ERCP 3D stone theter trawl iinated										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative complications –	□ IV □ V □ Total cho □ Subtotal □ Not per □ II Decis Findings: □ Yes If Choledoc	CVS succe for n in tec cholecystecto cholecy	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos' ative chola ective = R No stone Ba Trancystic closure: = No Spilt = Ble	□ C Standarc Sype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc Primary clos eeding el injury	If No, which cri Clearance Exposu Dnly two struct I = Fundus-first instituting = Fer py = Cholecyst Incisionless fluct lective, indication nanagement: = al = Choledochochochochochochochochochochochochocho	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) costomy) orescent ch on: □ Raisee Flushing wi lescope □ 1 Op cont: □ Yes	No net? (Tick all th patocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT BDI o ith saline and No intraopera perative amination (Al Prese Pre	ent: □ Yes □ Was time veri o ac US □ Intra op imaging s relaxant □ attempted Clean □ Clea □ Contami	No) s there a e-out to fy CVS? atomical y variant aoperative Fogarty ca an-Contam inated \Box Di	□ Yes □ N ERCP 3D stone theter trawl inated irty										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative complications - <i>excluding BDI</i>	□ IV □ V □ Total cho □ Subtotal □ Not per □ II Decis Findings: □ Yes If Choledoc	CVS succe for n in tec ilecystecto cholecyste formed (i ntraopera ion:Selo :Selo :Selo : (Type: : hotomy, o	obtained essfully? - ininimally vasive chnique omy (Type tectomy (T Diagnos: ative chola ective = R No stom Ba: Trancystic closure: = No Spilt = Bla ry = Bowe	□ C Standarc Sype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc Primary clos eeding el injury	If No, which cri Clearance Exposu Dnly two struct I = Fundus-first instituting = Fer py = Cholecyst Incisionless fluct lective, indication nanagement: = al = Choledochochochochochochochochochochochochocho	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) costomy) orescent ch on: □ Raisee Flushing wi lescope □ 1 Op cont: □ Yes	No net? (Tick all th patocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT BDI o ith saline and No intraopera perative amination (Al Prese Pre	ent: □ Yes □ Was time veri o ac US □ Intra op imaging s relaxant □ attempted Clean □ Clea □ Contami	No) s there a e-out to fy CVS? atomical y variant aoperative Fogarty ca an-Contam inated \Box Di	□ Yes □ N ERCP 3D stone theter trawl inated irty										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative complications - <i>excluding BDI</i>	□ IV □ V □ Total cho □ Subtotal □ Not per □ Ir Decis Findings: □ Yes If Choledoc	I CVS Succe for n in tec olecystector cholecyste cholecyster for med (n ntraopera ion: Sele ion: Sele Stone n chotomy, or Stones scular inju 0 c	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola cho stone Ba Trancystic closure: D No Spilt D Ble try D Bowe	□ Control Con	If No, which cri Clearance Exposu Dnly two struct I Fundus-first Incisionless fluct Incisionless flu	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) prescent ch on: □ Raisee Flushing wi plescope □ 1 Op cont: □ Yes ay outcome	No net? (Tick all th patocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT BDI o ith saline and No intraopera perative amination (Al apply) angle ate gallbladder al Yes IN y I Laparoscop concern I Pre-co smooth muscle ative treatment some staff)	ent: □ Yes □ Was time veri o ac US □ Intra op imaging s relaxant □ attempted Clean □ Clea □ Contami	No) s there a e-out to fy CVS? atomical y variant aoperative Fogarty ca an-Contam inated \Box Di	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD exploration Intraoperative complications - <i>excluding BDI</i> (see section 4) Highest 30-day Clavien-Dindo	 IV U Total cho Subtotal Not per In Decis Findings: Yes If Choledoco Bile spilt Major vas Illa (Radio 	CVS succe for n in tec ilecystecto cholecyst	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola choisting No stone Bai Trancystic closure: D No Spilt D Ble ury D Bowe	□ C Standarc Sype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc Primary clos eeding el injury Standarc Primary close eeding el injury Standarc Stan	If No, which cri Clearance Exposu Dnly two struct I Fundus-first Incisionless fluct Incisionless flu	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) orescent ch on: □ Raisee Flushing wi blescope □ 1 Op cont: □ Yes ay outcome (Length	No net? (Tick all the patocystic tria wer cystic platached to the e above Abdomina drain olangiography d LFT \square BDI of ith saline and No intraoperative amination (\square All staff \square sing \square No s \square Yes of stay:)	usable equipme hat apply) angle ate gallbladder al u Yes u N y u Laparoscop concern u Pre-consmooth muscle ative treatment utive treatment some staff) Unplanned	ent:	No) s there a e-out to fy CVS? anoperative Fogarty ca an-Contam inated \Box Di e \Box Yes USS \Box CT \Box	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD exploration CBD exploration Intraoperative complications - <i>excluding BDI</i> (see section 4) Highest 30-day	 IV U Total cho Subtotal Not per In Decis Findings: Yes If Choledoco Bile spilt Major vas Illa (Radio 	CVS succe for n in tec iolecystecto cholecyste cholecystecto cholecystec	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola com (Type choing of the choing of the store of the choing of the tective of the log the choing of the tective of the log the choing of the tective of the log the log the tective of the log the log the tective of the log the tective of the log	□ C Standarc Sype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrievz □ Choledoc Primary clos choledoc Primary clos eeding el injury Standarc Standarc Primary clos Primary clos	If No, which cri Clearance Exposu Dnly two struct I Fundus-first Incisionless fluct Incisionless flu	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) orescent ch on: □ Raisee Flushing wi blescope □ 1 Op cont: □ Yes ay outcome (Length	No net? (Tick all the patocystic tria wer cystic platached to the e above Abdomina drain olangiography d LFT \square BDI of ith saline and No intraoperative amination (\square All staff \square : \square No s	Al apply) angle ate gallbladder al Yes IN y I Laparoscop concern I Pre-co smooth muscle ative treatment some staff)	ent:	No) s there a e-out to fy CVS? atomical y variant aoperative Fogarty ca an-Contam inated \Box Di e \Box Pes	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative complications - <i>excluding BDI</i> (see section 4) Highest 30-day Clavien-Dindo	 IV U Total cho Subtotal Not per In Decis Findings: Yes If Choledoco Bile spilt Major vas Illa (Radio Illa (Radio 	CVS succe for n in tec iolecystecto cholecyste cholecystecto cholecystec	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola com (Type choing of the choing of the store of the choing of the tective of the log the choing of the tective of the log the choing of the tective of the log the log the tective of the log the log the tective of the log the tective of the log	□ Construction Co	If No, which cri Clearance Exposu Dnly two struct I = Fundus-first instituting = Fer py = Cholecyst Incisionless fluct lective, indication nanagement: = al = Choledochochochochochochochochochochochochocho	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) costomy) orescent ch on: □ Raise: Flushing wi lescope □ 1 Op cont. □ Yes ay outcome	No net? (Tick all th patocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT	Al apply) angle ate gallbladder al Yes D N y D Laparoscop concern D Pre-co smooth muscle ative treatment concern d Pre-co smooth muscle ative treatment Unplanned Re-imaging	ent: □ Yes □ Was time veri veri c US □ Intra pimaging s relaxant □ attempted Clean □ Cle □ Contami Reusable drapes	No) s there a e-out to fy CVS? anoperative Fogarty ca an-Contam inated \Box Di e \Box Yes USS \Box CT \Box	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD exploration CBD exploration Intraoperative complications - <i>excluding BDI</i> (see section 4) Highest 30-day Clavien-Dindo (CD) 30-day	 IV U Total cho Subtotal Not per In Decis Findings: Yes If Choledoco Bile spilt Major vas Illa (Radio Illa (Radio 	CVS succe for n in tec iolecystecto cholecyste cholecystecto cholecystec	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola choistone Ba: Trancystic closure: closure: closure	□ Construction of the section of th	If No, which cri Clearance Exposu Dnly two struct I Fundus-first Incisionless fluct Incisionless flu	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) nestrated) costomy) orescent ch- on: □ Raise: Flushing wi lescope □ 1 Op cont: □ Yes ay outcome (Length CD Grade: □ (CD Grade:	No net? (Tick all the patocystic tria wer cystic platached to the e above Abdomina drain olangiography d LFT BDI of th saline and No intraoperative amination (All staff Sightarrow No s Yes of stay:) No I II III IIIa IIIa	Al apply) angle ate gallbladder al Pes D N y D Laparoscop concern D Pre-co smooth muscle ative treatment Unplanned Re-imaging	nt: □ Yes □ Was time veri o o attempted Clean □ Cle. □ Contami Reusable drapes (Type: □ □ V)	No) s there a e-out to fy CVS? anoperative Fogarty ca an-Contam inated \Box Di e \Box Yes USS \Box CT \Box	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative complications - <i>excluding BDI</i> (see section 4) Highest 30-day Clavien-Dindo (CD) 30-day postoperative	 IV U Total cho Subtotal Not per In Decis Findings: Yes If Choledoco Bile spilt Major vas Illa (Radio Illa (Radio 	CVS succe for n in tec iolecystecto cholecyste cholecystecto cholecystec	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola choistone Ba: Trancystic closure: closure: closure	□ C Standarc Sype: □ Reco Itic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc Primary clos Choledoc Primary clos eeding el injury Signa No) death:) □ Surgical signa S	If No, which cri Clearance Exposu Dnly two struct I = Fundus-first instituting = Fer py = Cholecyst Incisionless fluct lective, indication nanagement: = al = Choledochochochochochochochochochochochochocho	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) orescent ch on: □ Raisee Flushing wi lescope □ 1 Of cont: □ Yes hy outcome (Length CD Grade: □ (CD Grade: □ 1 □ 1 □	No net? (Tick all th patocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT = BDI o th saline and No intraopera perative amination (All staff = =	All Present apply) angle ate gallbladder all Pres DN y D Laparoscop concern D Pre-co smooth muscle ative treatment Unplanned Re-imaging IIIb D IVa D IVb D IIIb D IVa D IVb D IIIb D IVa D IVb	nt: □ Yes □ Was time veri o o attempted Clean □ Cle. □ Contami Reusable drapes (Type: □ □ V)	No) s there a e-out to fy CVS? anoperative Fogarty ca an-Contam inated \Box Di e \Box Yes USS \Box CT \Box	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative complications - <i>excluding BDI</i> (see section 4) Highest 30-day Clavien-Dindo (CD) 30-day postoperative Complications	 IV U Total cho Subtotal Not per In Decis Findings: Yes If Choledoco Bile spilt Major vas Illa (Radio Illa (Radio 	CVS succe for n in tec iolecystecto cholecyste cholecystecto cholecystec	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola comy (Type tectory (T Diagnos: ative chola ective = R No stone Bai Trancystic closure: = No Spilt = Ble try = Bowe a 1 = II rainage? = top day of	□ C Standarc Sype: □ Reco Itic laparosco ngiogram □ outine; If se e; If stone, n sket retrievz □ Choledoc Primary clos Choledoc Primary clos eeding el injury Standarc Surgical S Pulmonary □ Surgical S Pulmonary □ Bil □ Bil	If No, which cri Clearance Exposu Dnly two struct I = Fundus-first Incisionless fluct Incisionless f	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) orescent ch on: □ Raisee Flushing wi lescope □ 1 Of cont: □ Yes hy outcome (Length cCD Grade: □ □ □ □ □ □ de: □ □ □ □ □	No net? (Tick all th patocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT □ BDI o th saline and No intraopera oerative amination (□ All staff □ =	Al apply) angle ate gallbladder al Pes IN y I Laparoscop concern I Pre-co smooth muscle ative treatment (IIIb IVa IVb IIIb IVa IVb IIIb IVa IVb IIIb IVa IVb IIIb IVa IVb Va IVb V)	nt: □ Yes □ Was time veri c US □ Intra pimaging s relaxant □ attempted Clean □ Clea □ Contami Clean □ Clea (Type: □ (Type: □	No) s there a e-out to fy CVS? anoperative Fogarty ca an-Contam inated \Box Di e \Box Yes USS \Box CT \Box	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative complications - <i>excluding BDI</i> (see section 4) Highest 30-day Clavien-Dindo (CD) 30-day postoperative	 IV U Total cho Subtotal Not per In Decis Findings: Yes If Choledoco Bile spilt Major vas Illa (Radio Illa (Radio 	CVS succe for n in tec iolecystecto cholecyste cholecystecto cholecystec	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola comy (Type tectory (T Diagnos: ative chola ective = R No stone Bai Trancystic closure: = No Spilt = Ble try = Bowe a 1 = II rainage? = top day of	□ C □ Standarc ype: □ Reco tic laparosco ngiogram □ outine; If se e; If stone, n sket retrieva □ Choledoc Primary clos □ No) □ Surgical 3 □ Pulmonary □ Bil □ Di □ Bil □ Intra-abdor	If No, which cri Clearance Exposu Dnly two struct I = Fundus-first instituting = Fer py = Cholecyst Incisionless fluct lective, indication nanagement: = al = Choledochochochochochochochochochochochochocho	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) orescent ch on: □ Raisee Flushing wi lescope □ 1 Of cont: □ Yes by outcome (Length of CD Grade: □ (CD Grade: de: □ 1 □ 11 □ (CD Grade	No net? (Tick all th patocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT □ BDI o ith saline and No intraopera oerative amination (□ All staff □ : □ No s Yes of stay:) No 1 □ II □ IIIa □ IIIa □ IIIb □ I □ II □ IIIa □ IIIa □ IIIb □ I □ II □ III □ IIIa □ IIIa □ IIIb □ I □ II □ III □ IIIa □ IIIa □ IIIb □ I □ II □ II □ IIIa □ IIIa □ IIIb □ I	Al apply) angle ate gallbladder al Pes IN y I Laparoscop concern I Pre-co smooth muscle ative treatment (IIIb IVa IVA IIIb IVA IVA	nt: □ Yes □ Was time veri c US □ Intra pimaging s relaxant □ attempted Clean □ Clea □ Contami Clean □ Clea □ Contami (Type: □ c V) /b □ V)	No) s there a e-out to fy CVS? anoperative Fogarty ca an-Contam inated \Box Di e \Box Yes USS \Box CT \Box	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										
difficulty (Nassar) - for minimally invasive technique Operation performed Intraoperative CBD assessment (Tick <u>all</u> that apply) CBD exploration Intraoperative complications - <i>excluding BDI</i> (see section 4) Highest 30-day Clavien-Dindo (CD) 30-day postoperative Complications	 IV U Total cho Subtotal Not per In Decis Findings: Yes If Choledoco Bile spilt Major vas Illa (Radio Illa (Radio 	CVS succe for n in tec iolecystecto cholecyste cholecystecto cholecystec	obtained essfully? - ninimally vasive chnique omy (Type tectomy (T Diagnos: ative chola comy (Type tectory (T Diagnos: ative chola ective = R No stone Bai Trancystic closure: = No Spilt = Ble try = Bowe a 1 = II rainage? = top day of	□ C C C C C C C C C C C C C C	If No, which cri Clearance Exposu Dnly two struct I = Fundus-first Incisionless fluct Incisionless f	□ Yes □ iteria was n e of the hep re of the lo ures are att None of th approach) hestrated) costomy) orescent ch on: □ Raisee Flushing wi lescope □ 1 Of cont: □ Yes Ny outcome (Length cCD Grade: □ (CD Grade: □ (CD Grade: □ (CD Grade: □ CD Grade: 0 CD Gra	No net? (Tick all th patocystic tria wer cystic pla cached to the e above Abdomina drain olangiography d LFT □ BDI o ith saline and No intraopera oerative amination (□ All staff □ : □ No s Yes of stay:) No 1 □ II □ IIIa □ IIIa □ IIIb □ I □ II □ IIIa □ IIIa □ IIIb □ I □ II □ III □ IIIa □ IIIa □ IIIb □ I □ II □ III □ IIIa □ IIIa □ IIIb □ I □ II □ II □ IIIa □ IIIa □ IIIb □ I	Al apply) angle ate gallbladder al Pes IN y I Laparoscop concern I Pre-co smooth muscle ative treatment (IIIb IVa IVb IIIb IVa IVb	nt: □ Yes □ Was time veri c US □ Intra pimaging s relaxant □ attempted Clean □ Clea □ Contami Clean □ Clea □ Contami (Type: □ c V) /b □ V)	No) s there a e-out to fy CVS? atomical y variant aoperative Fogarty ca an-Contam inated \Box Di \Box Uss USS \Box CT \Box \Box No	□ Yes □ N ERCP 3D stone theter trawl inated irty Yes □ No										



Section 4: BDI data fields

GECXO

BDI identified at	Section 4: BDI data fields									
30-day follow-up of index cholecystectomy	□ Yes (<u>if yes, please fill in the rest of the data points below</u>) □ No (Was BDI identified at one-year of index cholecystectomy : □ Yes □ No (<u>if yes, please fill in the rest of the data points below</u>)									
Presentation of BDI	□ Intraoperatively □ Controlled bile leak from abdominal drain □ Abdominal pain due to uncontrolled bile leak □ Obstructive jaundice or cholangitis □ Intra-abdominal abscess or biloma Days from index cholecystectomy to diagnosis (0 = intraoperatively)									
BDI grade (Strasberg)	□ A □ B □ C □ D □ E1 □ E2 □ E3 □ E4 □ E5	□ A □ B □ C □ D □ E1 □ E2 □ E3 Concomitant vascular injugy □ Yes (□ Right hepatic artery □ Common hepatic artery □ Main portal vein □ Right por							ht portal vein)	
Imaging modality to investigate and confirm BDI	OTC USS MRCP CT ERCP PTC Nuclear medicine scan Tubogram None Discussion with specialist HPB centre ON Not required - Injury occurred at specialist HPB									
Management of BDI (Tick <u>all</u> that apply)	 ERCP alone (Days after index cholecystectomy:) ERCP and stent (Days after index cholecystectomy:) PTC (Days after index cholecystectomy:) Washout only (Days after index cholecystectomy:) Surgical repair (Days after index cholecystectomy:) 									
Specialty of surgeon performing BDI repair	□ HPB surgeon □ UGI surgeon □ General surgeon	Method of repair	□ Roux-en-Y He □ CBD repair □ CBD repai □ CBD end to e □ Hepaticod	without T- ir with T-tu end anasto	tube ube mosis	Vascular repair	□ Yes □ No			
One-year complications (Tick <u>all</u> that apply)	□ Stricture formation (Days from repair to complication :) □ Cholangitis (Days from repair to complication :) Anastomotic leakage (Days from repair to complication :) □ Intra-abdominal abscess or biloma (Days from repair to complication :) □ Re-repair (Days from repair to complication :)									
			Section 5: H	istology da	ata fields					
Postoperative histology	□ Not sent for examination □ Sent for examination (Indication : □ Routine □ Selective; Days from index cholecystectomy to histology result : ; Result : □ Benign □ Malignant (<u>if malignant, please fill in the rest of the data points below</u>)									
Staging investigations after index cholecystectomy	 CT thorax abdomen pelvis (Days from histology result to staging:) MRI liver (Days from histology result to staging:) PET-CT (Days from histology result to staging:) Staging laparoscopy (Days from histology result to staging:) 									
TNM grade (AJCC 8 th edition)	T category: □ Tis □ T1a (lamina propria) □ T1b (muscularis) □ T2a (peritoneal side) □ T2b (hepatic side) □ T3 □ T4 N category: □ N0 □ N1 (1-3 nodes) □ N2 (>3 nodes) M category: □ M0 □ M1									
Discussed at MDT	□ Yes □ No Adjuvant treatment □ Chemotherapy □ Radiotherapy □ None									
Revisional surgery	□ Yes □ No - not required □ No - unresectable tumour									
Type of revisional surgery (Tick <u>all</u> that apply)	(Extent : □ Liver bed □ Bile duct		histol to re	ys from ogy result evisional urgery		<u>If revision</u>	al surgerv			
Pathology results	Resection margin status: R0 R1 R2 Lymphovascular invasion: Yes No Perineural invasion: Yes No									
Recurrence on imaging at one year	□ Yes (Days from surgery to recurrence :) □ No									
			Section 6: C	ne-year o	utcomes					
Highest one-year Clavien-Dindo (CD)	□ IIIa (F □ II □ IVa □		Total number of readmissions							
One-year complications (Tick <u>all</u> that apply)	□ IVa □ IVb □ V (Postop day of death:) □ Surgical site infection (CD Grade: □ I □ II □ IIIa □ IIIb □ IVa □ IVb □ V) □ Pulmonary complications (CD Grade: □ I □ II □ IIIa □ IIIb □ IVa □ IVb □ V) □ Bile leak (CD Grade: □ I □ II □ IIIa □ IIIb □ IVa □ IVb □ V) □ Biliary stricture (CD Grade: □ I □ II □ IIIa □ IIIb □ IVa □ IVb □ V) □ Bleeding (CD Grade: □ I □ II □ IIIa □ IIIb □ IVa □ IVb □ V) □ Intra-abdominal collection (CD Grade: □ I □ II □ IIIa □ IIIb □ IVa □ IVb □ V) □ Acute pancreatitis (CD Grade: □ I □ II □ IIIa □ IIIb □ IVa □ IVb □ V)									