

TENTACLE study - version 81.11

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1. Baseline characteristics - Baseline gegevens

Number	Question	Answers
1.1	Age at time of operation	<input type="text"/>
1.2	Year of surgery	<input type="text"/> (yyyy)
1.3	Sex	<input type="radio"/> Male <input type="radio"/> Female
1.4	Karnofsky score [100] Normal no complaints; no evidence of disease [90] Able to carry on normal activity; minor signs or symptoms of disease [80] Normal activity with effort; some signs or symptoms of disease [70] Cares for self; unable to carry on normal activity or to do active work [60] Requires occasional assistance, but is able to care for most of his personal needs [50] Requires considerable assistance and frequent medical care [40] Disabled; requires special care and assistance [30] Severely disabled; hospital admission is indicated although death not imminent [10-20] Very sick; hospital admission necessary; active supportive treatment necessary / Moribund; fatal processes progressing rapidly	<input type="radio"/> 100 <input type="radio"/> 90 <input type="radio"/> 80 <input type="radio"/> 70 <input type="radio"/> 60 <input type="radio"/> 50 <input type="radio"/> 40 <input type="radio"/> 30 <input type="radio"/> 10-20 <input type="radio"/> unknown
1.5	ECOG performance status	<input type="radio"/> 0 = Fully active, able to carry on all pre-disease performance without restriction <input type="radio"/> 1 = Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work <input type="radio"/> 2 = Ambulatory and capable of all selfcare but unable to carry out any work activities; up and about more than 50% of waking hours <input type="radio"/> 3 = Capable of only limited selfcare; confined to bed or chair more than 50% of waking hours <input type="radio"/> 4 = Completely disabled; cannot carry on any selfcare; totally confined to bed or chair <input type="radio"/> Unknown
1.6	Length	<input type="text"/> centimeters
1.7	Weight	<input type="text"/> kilograms
1.8	ASA classification	<input type="radio"/> ASA I <input type="radio"/> ASA II <input type="radio"/> ASA III <input type="radio"/> ASA IV <input type="radio"/> unknown
1.9	Myocardial infarction	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.10	Congestive heart failure	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.11	Peripheral vascular disease	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown

1.12	TIA or CVA with mild/no residual weakness	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.13	Dementia	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.14	Chronic pulmonary disease includes aortic aneurysm >= 6 cm)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.15	Connective tissue disease	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.16	Peptic ulcer disease	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.17	Mild liver disease (without portal hypertension, includes chronic hepatitis)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.18	Diabetes without end-organ damage (excludes diet-controlled alone)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.19	Hemiplegia	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.20	Moderate or severe renal disease tbv Charlson index	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.21	Diabetes with end-organ damage (retinopathy, neuropathy, nephropathy, or brittle diabetes)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.22	Tumour without metastasis (exclude if > 5 y from diagnosis tbv Charlson index	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.23	Leukaemia (acute or chronic)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.24	Lymphoma	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.25	Moderate or severe liver disease	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.26	Metastatic solid tumour	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown

1.27	AIDS (not just HIV positive)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.28	Creatinine measurement unit in hospital : please fill in local measurement unit, even if baseline creatinine is not available. baseline, until three months prior to operation	<input type="radio"/> mg/dL <input type="radio"/> µmol/L <input type="radio"/> Unknown measurement unit
1.28.1	If 'Creatinine measurement unit in hospital : please fill in local measurement unit, even if baseline creatinine is not available.' is equal to 'mg/dL' answer this question: Creatinine milligram/dL baseline, until three months prior to operation	<input type="text"/> mg/dL
1.28.2	If 'Creatinine measurement unit in hospital : please fill in local measurement unit, even if baseline creatinine is not available.' is equal to 'µmol/L' answer this question: Creatinine µmol/L baseline, until three months prior to operation	<input type="text"/> µmol/liter
1.29	Bilirubin (total) unit of measurement in hospital: please fill in local measurement unit, even if baseline bilirubin is not available. baseline, until three months prior to operation	<input type="radio"/> mg/dL <input type="radio"/> µmol/L <input type="radio"/> Unknown measurement unit
1.29.1	If 'Bilirubin (total) unit of measurement in hospital: please fill in local measurement unit, even if baseline bilirubin is not available.' is equal to 'mg/dL' answer this question: Bilirubin, total, mg/dL	<input type="text"/> mg/dL
1.29.2	If 'Bilirubin (total) unit of measurement in hospital: please fill in local measurement unit, even if baseline bilirubin is not available.' is equal to 'µmol/L' answer this question: Bilirubin, total, µmol/L baseline, until three months prior to operation	<input type="text"/> µmol/L
1.30	Platelets baseline, until three months prior to operation	<input type="text"/> x10 ⁹ /L
1.31	Histologic type of the tumor	<input type="radio"/> Adenocarcinoma <input type="radio"/> Squamous Cell Carcinoma <input type="radio"/> Other <input type="radio"/> Unknown
1.32	Where is the bulk of the tumor located?	<input type="radio"/> Intrathoracic middle esophagus <input type="radio"/> Intrathoracic distal esophagus <input type="radio"/> Esopagogastric junction <input type="radio"/> Unknown
1.33	cT stadium Please fill in as specifically as possible. Rather register T1a instead of T1, if diagnosed. T1 = Tumor invades lamina propria, muscularis mucosae of submucosa. T1a = Tumor invades lamina propria of muscularis mucosae. T1b =Tumor invades submucosa T2 = Tumor invades muscularis propria T3 = Tumor invades adventitia T4 = Tumor invades adjacent structures T4a = Tumor invades the pleura, pericardium, azygos vein, diaphragm, or peritoneum T4b =Tumor invades other adjacent structures, such as aorta, vertebral body, or trachea Tx = Tumor cannot be assessed	<input type="radio"/> T1 <input type="radio"/> T1a <input type="radio"/> T1b <input type="radio"/> T2 <input type="radio"/> T3 <input type="radio"/> T4 <input type="radio"/> T4a <input type="radio"/> Tx

1.34	cN stadium N0 = No regional lymph node metastasis N1 = Metastasis in 1–2 regional lymph nodes N2 = Metastasis in 3–6 regional lymph nodes N3 = Metastasis in 7 or more regional lymph nodes N+ = Suspected lymph nodes, but unknown amount NX = Regional lymph nodes cannot be assessed	<input type="radio"/> N0 <input type="radio"/> N1 <input type="radio"/> N2 <input type="radio"/> N3 <input type="radio"/> N+ <input type="radio"/> Nx
1.35	cM stadium	<input type="radio"/> M0 <input type="radio"/> M1 <input type="radio"/> Mx
1.36	Neoadjuvant therapy?	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
1.36.1	<i>If 'Neoadjuvant therapy?' is equal to 'Yes' answer this question:</i> Type of neoadjuvant therapy	<input type="radio"/> Chemotherapy <input type="radio"/> Chemoradiotherapy <input type="radio"/> Radiotherapy <input type="radio"/> Unknown

2. Resection - Operation characteristics

Number	Question	Answers
2.1	Resection type	<input type="radio"/> McKeown <input type="radio"/> Ivor Lewis <input type="radio"/> Transhiatal <input type="radio"/> Other <input type="radio"/> Unknown
2.1.1	<i>If 'Resection type' is equal to 'Other' answer this question:</i> Specify:	<input type="text"/>
2.2	Operation type: abdominal phase	<input type="radio"/> Open <input type="radio"/> Laparoscopic <input type="radio"/> Laparoscopic converted to open <input type="radio"/> Robotic <input type="radio"/> Robotic converted to laparoscopic <input type="radio"/> Robotic converted to open <input type="radio"/> Unknown
2.3	Operation type thoracic phase	<input type="radio"/> Open-right chest <input type="radio"/> Open-left chest <input type="radio"/> Open-thoracoabdominal <input type="radio"/> Thoracoscopic <input type="radio"/> Thoracoscopic converted to open <input type="radio"/> Transhiatal <input type="radio"/> Robotic <input type="radio"/> Robotic converted to thoracoscopic <input type="radio"/> Robotic converted to open <input type="radio"/> Unknown
2.4	Type of anastomosis	<input type="radio"/> Hand-sewn <input type="radio"/> Stapled <input type="radio"/> Semi-stapled <input type="radio"/> Unknown

2.5	Location of anastomosis	<input type="radio"/> Cervical <input type="radio"/> Intrathoracic <input type="radio"/> Unknown
2.6	Configuration of anastomosis	<input type="radio"/> End-to-end <input type="radio"/> Side-to-side <input type="radio"/> End-to-side <input type="radio"/> Unknown
2.7	Omental wrap	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
2.8	Pleural flap	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
2.9	perioperative Selective Digestive Decontamination (SDD) received	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown

3. Anastomotic leakage diagnosis - Anastomotic leakage diagnosis & parameters at diagnosis

Number	Question	Answers
3.1	Time from surgery to diagnosis of the leakage (days)	<input type="text"/>
3.2	Assessment that first diagnosed anastomotic leakage	<input type="radio"/> Endoscopic (perforation) <input type="radio"/> Contrast swallow esophagram <input type="radio"/> CT-scan (contrast leakage) <input type="radio"/> Ingested fluids by drain/from cervical wound <input type="radio"/> Reoperation <input type="radio"/> Other <input type="radio"/> Unknown
3.2.1	<i>If 'Assessment that first diagnosed anastomotic leakage' is equal to 'Other' answer this question:</i> Specify:	<input type="text"/>
3.3	Anastomosis assessments performed <48 hours of diagnosis of anastomotic leakage	<input type="checkbox"/> Endoscopic (perforation) <input type="checkbox"/> Contrast swallow esophagram <input type="checkbox"/> CT-scan (contrast leakage) <input type="checkbox"/> Ingested fluids by drain/from cervical wound <input type="checkbox"/> Reoperation <input type="checkbox"/> Other <input type="checkbox"/> Unknown
3.4	If invasive treatment was performed: approximate time from diagnosis to invasive treatment of the leakage (hours) invasive treatment: e.g. radiologic drainage, endoscopic, surgical	<input type="text"/> hours
3.5	What ward was the patient on at the time of diagnosis	<input type="radio"/> Surgical ward <input type="radio"/> ICU <input type="radio"/> Medium/high care/PACU <input type="radio"/> Other <input type="radio"/> Unknown

3.5.1	If 'What ward was the patient on at the time of diagnosis' is equal to 'Other' answer this question: Specify:	<input type="text"/>
3.6	q-SOFA score: altered mental status (or GCS<15) (parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used.)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.7	Q-SOFA: Respiratory rate: >22/min (parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used.)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.8	Q-SOFA: systolic blood pressure <100 mmHg	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.9	Organ failure at time of diagnosis. Cardiovascular: need for inotropic support, parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.10	Organ failure at time of diagnosis. Pulmonary: need for ventilation parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.11	Organ failure at time of diagnosis. Renal: creatinine >170 µg/L parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.12	Organ failure at time of diagnosis. Liver: bilirubin >33µmol/L parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.13	Organ failure at time of diagnosis. Coagulation: platelets <100*10 ³ /µL parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.14	Ventilation of patient at the time of diagnosis	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.14.1	If 'Ventilation of patient at the time of diagnosis' is equal to 'Yes' answer this question: FiO2 at the time of diagnosis (%) parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/> % Oxygen
3.14.2	If 'Ventilation of patient at the time of diagnosis' is equal to 'No' answer this question: O2 consumption at the time of diagnosis parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/> L/min
3.15	Nasogastric Tube in place parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
3.16	Diet at the time of diagnosis parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="radio"/> No dietary restrictions <input type="radio"/> Liquid diet <input type="radio"/> Clear liquid diet <input type="radio"/> Water <input type="radio"/> Nil per mouth <input type="radio"/> Unknown

3.17	Leukocytes count parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/>	x10 ⁹ / L
3.18	CRP at the time of diagnosis parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/>	mg/L
3.19	If 'Creatinine measurement unit in hospital : please fill in local measurement unit, even if baseline creatinine is not available.' is equal to 'µmol/L' answer this question: Creatinine at the time of diagnosis µmol/L parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/>	µmol/L
3.20	If 'Creatinine measurement unit in hospital : please fill in local measurement unit, even if baseline creatinine is not available.' is equal to 'mg/dL' answer this question: Creatinine at the time of diagnosis mg/dL parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/>	mg/dL
3.21	If 'Bilirubin (total) unit of measurement in hospital: please fill in local measurement unit, even if baseline bilirubin is not available.' is equal to 'µmol/L' answer this question: Bilirubin total at the time of diagnosis µmol/L parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/>	µmol/L
3.22	If 'Bilirubin (total) unit of measurement in hospital: please fill in local measurement unit, even if baseline bilirubin is not available.' is equal to 'mg/dL' answer this question: Bilirubin total at the time of diagnosis mg/dL parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/>	mg/dL
3.23	Arterial blood gass lactate at the time of diagnosis parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/>	mmol/L
3.24	paO ₂ at the time of diagnosis parameters closest to diagnoses should be used and parameters within 24 hours of diagnosis can be used	<input type="text"/>	kPa
3.25	Amylase from surgival drain at the time of diagnosis -1. highest value in case of multiple drains or measurements. -2. parameters within 24 hours of diagnosis can be used	<input type="text"/>	U/L

4. Anastomotic leakage diagnosis - Leakage characteristics

Number	Question	Answers
4.1	Location of the leak	<input type="radio"/> Esophagogastric anastomosis <input type="radio"/> Gastric tube <input type="radio"/> Blind loop <input type="radio"/> Other <input type="radio"/> Unknown
4.1.1	If 'Location of the leak' is equal to 'Other' answer this question: Specify:	<input type="text"/>

4.2	Estimated circumference of the leakage	<input type="radio"/> 0-25% <input type="radio"/> 25-50% <input type="radio"/> 50-75% <input type="radio"/> 75-100% <input type="radio"/> Unknown
4.3	Gastric tube overall condition	<input type="radio"/> Vital <input type="radio"/> Ischemic <input type="radio"/> Necrotic <input type="radio"/> Unknown
4.4	Estimated surface of the leak	<input type="text"/> cm2 (square centimeters)
4.5	Extent of the contamination	<input type="checkbox"/> None <input type="checkbox"/> Cervical fluid collections <input type="checkbox"/> Mediastinal fluid collections <input type="checkbox"/> Pleural fluid collections <input type="checkbox"/> Abdominal collections <input type="checkbox"/> Unknown
4.6	(Postoperative) drains in place at time of diagnosis	<input type="checkbox"/> Mediastinal drain <input type="checkbox"/> Cervical drain <input type="checkbox"/> Chest tube(s) <input type="checkbox"/> NG-tube <input type="checkbox"/> None <input type="checkbox"/> Unknown
4.6.1	<i>If '(Postoperative) drains in place at time of diagnosis' is equal to 'Mediastinal drain' answer this question:</i> Does this mediastinal drain clinically drain the anastomotic leak at the time of diagnosis?	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
4.6.2	<i>If '(Postoperative) drains in place at time of diagnosis' is equal to 'Cervical drain' answer this question:</i> Does this cervical drain clinically drain the anastomotic leak at the time of diagnosis?	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
4.6.3	<i>If '(Postoperative) drains in place at time of diagnosis' is equal to 'Chest tube (s)' answer this question:</i> Does this drain (chest tubes) clinically drain the anastomotic leak at the time of diagnosis?	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
4.6.4	<i>If '(Postoperative) drains in place at time of diagnosis' is equal to 'NG-tube' answer this question:</i> Does this drain (NG-tube) clinically drain the anastomotic leak at the time of diagnosis?	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown

5. Treatments Anastomotic Leakage - Primary treatment

Number	Question	Answers
5.1	Summary primary treatment Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy. This can consist of a single treatment or a combination of treatments. Additional treatments that occur within 48 hours but that are initiated because of failure of the primary treatment strategy or were not intended otherwise should be scored as secondary treatment.	
5.2	(re-)admission to ICU or medium care/high care Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> ICU <input type="radio"/> Medium/high care/PACU <input type="radio"/> No readmission to ICU or medium/high care <input type="radio"/> Unknown

5.3	Nil by mouth Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
5.4	Antibiotic treatment according to local protocols Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
5.5	NG tube placement Treatment within 48 hours that was intended to take place when the leak was diagnosed	<input type="radio"/> With suction <input type="radio"/> Without suction <input type="radio"/> No NG Tube placement <input type="radio"/> Unknown
5.6	NG tube repositioning Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> Repositioning with suction <input type="radio"/> Repositioning without suction <input type="radio"/> No repositioning <input type="radio"/> Unknown
5.7	Tube placement through anastomotic defect Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
5.8	EndoVAC/endosponge placement Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
5.9	Stent placement Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
5.10	Type stent Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="text"/>
5.11	Endoscopic clipping Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
5.12	Feeding tube placement Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> Nasoduodenal/Nasojejunal <input type="radio"/> None <input type="radio"/> Unknown
5.13	Radiologic drainage (percutaneous) Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
5.14	Radiologic drainage location Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> Thoracic cavity <input type="radio"/> Mediastinum <input type="radio"/> Abdominal <input type="radio"/> Location unknown
5.15	Bedside surgical chest tube placement Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
5.16	Reoperation Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown

5.17	Reoperation approach (multiple options possible) Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="checkbox"/> Thoracoscopic <input type="checkbox"/> Thoracotomy <input type="checkbox"/> VATS <input type="checkbox"/> Laparoscopic <input type="checkbox"/> Laparotomy <input type="checkbox"/> Other <input type="checkbox"/> Unknown
5.17.1	If 'Reoperation approach (multiple options possible)' is equal to 'Other' answer this question: Specify other: Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="text"/>
5.20.1	If 'Reoperation procedure' is equal to 'Other' answer this question: Specify other: Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="text"/>
5.18	Reoperation procedure Treatment within 48 hours after anastomotic leakage that can be considered to be the primary treatment strategy.	<input type="checkbox"/> Drainage only <input type="checkbox"/> Suturing of the leak <input type="checkbox"/> Resection of the leak and re-anastomosis <input type="checkbox"/> Repair of anastomosis with muscle flap <input type="checkbox"/> Disconnection and cervical esophagostomy <input type="checkbox"/> Surgical jejunal feeding tube <input type="checkbox"/> Other <input type="checkbox"/> Unknown

6. Treatments Anastomotic Leakage - Secondary treatment

Number	Question	Answers
6.1	Summary secondary treatment Treatment at any time after anastomotic leakage that can be considered to be the secondary treatment strategy. This can consist of a single treatment or a combination of treatments. .	<input type="text"/>
6.2	Time from surgery to secondary treatment (days) Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="text"/> days
6.3	(re-) admission to ICU or medium care/high care (only esophagectomy related readmissions) Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> ICU <input type="radio"/> Medium/high care/PACU <input type="radio"/> No readmission to ICU or medium/high care <input type="radio"/> Unknown
6.4	nil by mouth regime Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.5	antibiotic treatment according to local protocols Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.6	NG tube placement Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> With suction <input type="radio"/> Without suction <input type="radio"/> No NG Tube placement <input type="radio"/> Unknown

6.7	NG tube repositioning Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> Repositioning with suction <input type="radio"/> Repositioning without suction <input type="radio"/> No repositioning <input type="radio"/> Unknown
6.8	Tube placement through anastomotic defect Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.9	endoVAC/endoSponge placement Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.10	Stent placement Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.11	Stent type	<input type="text"/>
6.12	Endoscopic clipping	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.13	Feeding tube placement Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> Nasoduodenal/Nasojejunal <input type="radio"/> None <input type="radio"/> Unknown
6.14	Radiologic drainage Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.15	Radiologic drainage location Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> Thoracic cavity <input type="radio"/> Mediastinum <input type="radio"/> Abdominal <input type="radio"/> Location unknown
6.16	Bedside surgical chest tube placement Treatment at any time that was not intended to take place when the leak was diagnosed	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.17	Reoperation	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
6.18	Reoperation approach	<input type="checkbox"/> Thoracoscopic <input type="checkbox"/> Thoracotomy <input type="checkbox"/> VATS <input type="checkbox"/> Laparoscopic <input type="checkbox"/> Laparotomy <input type="checkbox"/> Other <input type="checkbox"/> Unknown
6.19	Reoperation procedure	<input type="checkbox"/> Drainage only <input type="checkbox"/> Suturing of the leak <input type="checkbox"/> Resection of the leak and re-anastomosis <input type="checkbox"/> Repair of anastomosis with muscle flap <input type="checkbox"/> Disconnection and cervical esophagostomy <input type="checkbox"/> Surgical jejunal feeding tube <input type="checkbox"/> Other <input type="checkbox"/> Unknown

7. Outcomes Treatments Anastomotic Leakage - Leak Healing

Number	Question	Answers
7.1	Anastomotic leak healed Assessed by endoscopy, radiologic imaging or clinically. Clinical healing is defined to occur if a patient's is set to non-clear liquid foods.	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
7.2	Anastomotic leak healing assessment	<input type="checkbox"/> Endoscopy <input type="checkbox"/> Radiologic imaging <input type="checkbox"/> Clinically (Clinical healing is defined to occur if a patient is able to consume at least non-clear liquid food e.g. yoghurt, custard) <input type="checkbox"/> Other <input type="checkbox"/> Unknown
7.2.1	If 'Anastomotic leak healing assessment' is equal to 'Other' answer this question: Specify other	<input type="text"/>
7.3	Time from diagnosis to healing of the anastomotic leak (days)	<input type="text"/> days

8. Outcomes Treatments Anastomotic Leakage - Reinterventions

Number	Question	Answers
8.1	Total number of endoscopic interventions	<input type="text"/> interventions
8.2	Total number of stent placements	<input type="text"/> stents
8.3	Total number of endoVAC/endoSponge treatments	<input type="text"/> endoVACs/endosponges
8.4	Total number of radiologic interventions	<input type="text"/> radiologic reinterventions
8.5	Total number of bedside surgical reinterventions (e.g. opening of wounds, chest tube placements)	<input type="text"/> bedside surgical reinterventions
8.6	Total number of minimally invasive surgical reinterventions	<input type="text"/> reinterventions
8.7	Total number of open surgical reinterventions	<input type="text"/> interventions

9. Outcomes Treatments Anastomotic Leakage - Length of stay and mortality

Number	Question	Answers
9.1	ICU length of stay (Days during planned postoperative ICU admission. All other admittance to the ICU is scored as a readmission)	<input type="text"/> days
9.2	ICU readmission (all ICU readmission, so also admissions non-related to the esophagectomy)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
9.3	Length of stay during readmission (days)	<input type="text"/> days
9.4	in-hospital mortality	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown

9.5	180-day mortality	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
9.5.1	<i>If '180-day mortality' is equal to 'Yes' answer this question:</i> 90-day mortality	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
9.5.1.1	<i>If '90-day mortality' is equal to 'Yes' answer this question:</i> 30-day mortality	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown

10. Outcomes Treatments Anastomotic Leakage - Complications

Number	Question	Answers
10.1	Summary ECCG definitions (Low, Ann. Surg. 2015) are used, unless stated otherwise. (https://www.ncbi.nlm.nih.gov/pubmed/25607756)	
10.2	Complication pulmonary -Pneumonia (Definition: UPS, Weijs 2016, J. Gastrointest Surg) -Temperature [°C]: ≤ 36.0 and ≥ 38.5 = 1 point -Leukocyte count [$\times 10^9/L$]: < 4.0 or > 11.0 : = 1 point -Pulmonary radiography: Diffused (or patchy) infiltrate = 1 point Well-circumscribed infiltrate = 2 points A sum score of 2 points or higher, of which at least 1 point is assigned due to infiltrative findings on pulmonary radiography, indicates treatment of pneumonia -Pleural effusion requiring additional drainage procedure -Pneumothorax requiring treatment -Atelectasis mucous plugging requiring bronchoscopy -Respiratory failure requiring reintubation -Acute respiratory distress syndrome (Berlin Definition) https://www.ncbi.nlm.nih.gov/pubmed/22797452 -Acute aspiration -Tracheobronchial injury -Chest tube maintenance for air leak for > 10 d postoperatively	<input type="radio"/> No <input type="radio"/> Yes
10.2.1	<i>If 'Complication pulmonary' is equal to 'Yes' answer this question:</i> Complication pulmonary type	<input type="checkbox"/> Pneumonia* <input type="checkbox"/> Pleural effusion requiring additional drainage procedure <input type="checkbox"/> Pneumothorax requiring treatment <input type="checkbox"/> Atelectasis mucous plugging requiring bronchoscopy <input type="checkbox"/> Respiratory failure requiring reintubation <input type="checkbox"/> Acute respiratory distress syndrome # <input type="checkbox"/> Acute aspiration <input type="checkbox"/> Tracheobronchial injury

-
- 10.2.1.1 **If 'Complication pulmonary type' is equal to 'Pneumonia' answer this question:**
- Pneumonia clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.2.1.2 **If 'Complication pulmonary type' is equal to 'Pleural effusion requiring additional drainage procedure' answer this question:**
- Pleural effusion clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.2.1.3 **If 'Complication pulmonary type' is equal to 'Pneumothorax requiring treatment' answer this question:**
- Pneumothorax clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.2.1.4 **If 'Complication pulmonary type' is equal to 'Atelectasis mucous plugging requiring bronchoscopy' answer this question:**
- Atelactasis mucous clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V

-
- 10.2.1.5 **If 'Complication pulmonary type' is equal to 'Respiratory failure requiring reintubation' answer this question:** Grade I
 Respiratory failure clavien dindo Grade II
 Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, Grade IIIa
 endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, Grade IIIb
 diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside. Grade IVa
 Grade IVb
 Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included. Grade V
 Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
 Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
 Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
 Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
 Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
-
- 10.2.1.6 **If 'Complication pulmonary type' is equal to 'Acute respiratory distress syndrome #' answer this question:** Grade I
 ARDS clavien dindo Grade II
 ARDS: Berlin definition Grade IIIa
 Grade IIIb
 Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, Grade IVa
 endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, Grade IVb
 diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside. Grade V
 Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
 Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
 Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
 Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
 Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
 Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
-
- 10.2.1.7 **If 'Complication pulmonary type' is equal to 'Acute aspiration' answer this question:** Grade I
 Acute aspiration clavien dindo Grade II
 Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, Grade IIIa
 endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, Grade IIIb
 diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside. Grade IVa
 Grade IVb
 Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included. Grade V
 Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
 Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
 Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
 Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
 Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
-
- 10.2.1.8 **If 'Complication pulmonary type' is equal to 'Tracheobronchial injury' answer this question:** Grade I
 Tracheobronchial injury clavien dindo Grade II
 Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, Grade IIIa
 endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, Grade IIIb
 diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside. Grade IVa
 Grade IVb
 Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included. Grade V
 Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
 Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
 Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
 Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
 Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.

10.3	<p>Complication cardiac</p> <p>-Cardiac arrest requiring CPR</p> <p>-Myocardial infarction (Definition: World Health Organization)</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/?term=World+Health+Organization+definition+of+myocardial+infarction%3A+2008-09+revision</p> <p>-Dysrhythmia atrial requiring treatment</p> <p>-Dysrhythmia ventricular requiring treatment</p> <p>-Congestive heart failure requiring treatment</p>	<input type="radio"/> No <input type="radio"/> Yes
10.3.1	<p>If 'Complication cardiac' is equal to 'Yes' answer this question:</p> <p>Complication cardiac type</p>	<input type="checkbox"/> Cardiac arrest requiring CPR <input type="checkbox"/> Myocardial infarction* <input type="checkbox"/> Dysrhythmia atrial requiring treatment <input type="checkbox"/> Dysrhythmia ventricular requiring treatment <input type="checkbox"/> Congestive heart failure requiring treatment <input type="checkbox"/> Pericarditis requiring treatment
10.3.1.1	<p>If 'Complication cardiac type' is equal to 'Cardiac arrest requiring CPR' answer this question:</p> <p>Cardiac arrest(CPR) claven dindo</p> <p>Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications.Blood transfusionsand total parenteral nutritionare also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidalbleeding,but excluding transient ischemic attacks (TIA);IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Grade I <input type="radio"/> Grade II <input type="radio"/> Grade IIIa <input type="radio"/> Grade IIIb <input type="radio"/> Grade IVa <input type="radio"/> Grade IVb <input type="radio"/> Grade V
10.3.1.2	<p>If 'Complication cardiac type' is equal to 'Myocardial infarction**' answer this question:</p> <p>Myocardial infarction (Definition: World Health Organization) claven dindo</p> <p>Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications.Blood transfusionsand total parenteral nutritionare also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidalbleeding,but excluding transient ischemic attacks (TIA);IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Grade I <input type="radio"/> Grade II <input type="radio"/> Grade IIIa <input type="radio"/> Grade IIIb <input type="radio"/> Grade IVa <input type="radio"/> Grade IVb <input type="radio"/> Grade V

-
- 10.3.1.3 **If 'Complication cardiac type' is equal to 'Dysrhythmia atrial requiring treatment' answer this question:**
- Dysrhythmia atrial clavier dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.3.1.4 **If 'Complication cardiac type' is equal to 'Dysrhythmia ventricular requiring treatment' answer this question:**
- Dysrhythmia ventricular clavier dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.3.1.5 **If 'Complication cardiac type' is equal to 'Congestive heart failure requiring treatment' answer this question:**
- Congestive heart failure clavier dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.3.1.6 **If 'Complication cardiac type' is equal to 'Pericarditis requiring treatment' answer this question:**
- Pericarditis clavier dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V

- 10.4 Complications gastrointestinal No
 -Esophagoenteric leak from anastomosis, staple line, or localized conduit necrosis. Yes
- Defined as: Full thickness GI defect involving esophagus, anastomosis, staple line, or conduit irrespective of presentation or method of identification
- Type I: Local defect requiring no change in therapy or treated medically or with dietary modification
- Type II: Localized defect requiring interventional but not surgical therapy, for example, interventional radiology drain, stent or bedside opening, and packing of incision
- Type III: Localized defect requiring surgical therapy
- Conduit necrosis/failure.
- Type I: Conduit necrosis focal
- Identified endoscopically
- Treatment—Additional monitoring or non-surgical therapy
- Type II: Conduit necrosis focal
- Identified endoscopically and not associated with free anastomotic or conduit leak Treatment—Surgical therapy not involving esophageal diversion
- Type III: Conduit necrosis extensive Treatment—Treated with conduit resection with diversion
- Ileus defined as small bowel dysfunction preventing or delaying enteral feeding
- Small bowel obstruction
- Feeding Jejunio-tube complication
- Pyloromyotomy/pyloroplasty complication
- Clostridium difficile Infection
- Gastrointestinal bleeding requiring intervention or transfusion
- Delayed conduit emptying requiring intervention or delaying discharge or requiring maintenance of NG drainage >7 d postoperatively
- Pancreatitis
- Liver dysfunction

- 10.4.1 ***If 'Complications gastrointestinal' is equal to 'Yes' answer this question:***
 Complication GI types
- Esophagoenteric leak from anastomosis, staple line, or localized conduit necrosis.
- Conduit necrosis/failure.
- Ileus defined as small bowel dysfunction preventing or delaying enteral feeding
- Small bowel obstruction
- Feeding Jejunio-tube complication
- Pyloromyotomy/pyloroplasty complication
- Clostridium difficile Infection
- Gastrointestinal bleeding requiring intervention or transfusion
- Delayed conduit emptying requiring intervention or delaying discharge or requiring maintenance of NG drainage >7 d postoperatively
- Pancreatitis
- Liver dysfunction

- 10.4.1.1 **If 'Complication GI types' is equal to 'Esophagoenteric leak from anastomosis, staple line, or localized conduit necrosis.'** Grade I
answer this question: Grade II
 Esophagoenteric leak (from anastomosis, staple line, or localized conduit necrosis.) clavien dindo Grade IIIa
 Esophagogastric Leak Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
- Defined as: Full thickness GI defect involving esophagus, anastomosis, staple line, or conduit irrespective of presentation or method of identification
- Type I: Local defect requiring no change in therapy or treated medically or with dietary modification
- Type II: Localized defect requiring interventional but not surgical therapy, for example, interventional radiology drain, stent or bedside opening, and packing of incision
- Type III: Localized defect requiring surgical therapy
- Clavien dindo** Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.

- 10.4.1.2 **If 'Complication GI types' is equal to 'Pancreatitis' answer this question:** Grade I
 Pancreatitis clavien dindo Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.

- 10.4.1.3 **If 'Complication GI types' is equal to 'Liver dysfunction' answer this question:** Grade I
 Liver dysfunction clavien dindo Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.

- 10.4.1.4 **If 'Complication GI types' is equal to 'Ileus defined as small bowel dysfunction preventing or delaying enteral feeding' answer this question:**
- Ileus (defined as small bowel dysfunction preventing or delaying enteral feeding) clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
- Grade II
- Grade IIIa
- Grade IIIb
- Grade IVa
- Grade IVb
- Grade V
-
- 10.4.1.5 **If 'Complication GI types' is equal to 'Conduit necrosis/failure.' answer this question:**
- Conduit necrosis/failure grade
- Type I: Conduit necrosis focal - Identified endoscopically - Treatment—Additional monitoring or non-surgical therapy
- Type II: Conduit necrosis focal - Identified endoscopically and not associated with free anastomotic or conduit leak - Treatment—Surgical therapy not involving esophageal diversion
- Type III: Conduit necrosis extensive - Treatment—Treated with conduit resection with diversion
- Unknown
-
- 10.4.1.6 **If 'Complication GI types' is equal to 'Conduit necrosis/failure.' answer this question:**
- Conduit necrosis/failure clavien dindo
- Conduit necrosis** Conduit Necrosis
- Type I: Conduit necrosis focal Identified endoscopically Treatment—Additional monitoring or non-surgical therapy
- Type II: Conduit necrosis focal Identified endoscopically and not associated with free anastomotic or conduit leak Treatment—Surgical therapy not involving esophageal diversion
- Type III: Conduit necrosis extensive Treatment—Treated with conduit resection with diversion
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
- Grade II
- Grade IIIa
- Grade IIIb
- Grade IVa
- Grade IVb
- Grade V

-
- 10.4.1.7 **If 'Complication GI types' is equal to 'Small bowel obstruction' answer this question:**
- Small bowel obstruction clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.4.1.8 **If 'Complication GI types' is equal to 'Feeding Jejunotube complication' answer this question:**
- Feeding J-tube complication clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.4.1.9 **If 'Complication GI types' is equal to 'Pyloromyotomy/pyloroplasty complication' answer this question:**
- Pyloromyotomy/pyloroplasty complication clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.4.1.10 **If 'Complication GI types' is equal to 'Clostridium difficile Infection' answer this question:**
- Clostridium dif. clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V

- 10.4.1.11 **If 'Complication GI types' is equal to 'Gastrointestinal bleeding requiring intervention or transfusion' answer this question:**
- Gastrointestinal bleeding (requiring intervention or transfusion) Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoid bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V

- 10.4.1.12 **If 'Complication GI types' is equal to 'Delayed conduit emptying requiring intervention or delaying discharge or requiring maintenance of NG drainage >7 d postoperatively' answer this question:**
- Delayed conduit emptying (requiring intervention or delaying discharge or requiring maintenance of NG drainage >7 d postoperatively) Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoid bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V

- 10.5 Complication urologic
- Acute renal insufficiency (defined as doubling of baseline creatinine)
- Acute renal failure requiring dialysis
- Urinary tract infection
- Urinary retention requiring reinsertion of urinary catheter, delaying discharge, or discharge with urinary catheter
- No
 Yes

- 10.5.1 **If 'Complication urologic' is equal to 'Yes' answer this question:**
- Complication urologic type
- Acute renal insufficiency (defined as doubling of baseline creatinine)
 Acute renal failure requiring dialysis
 Urinary tract infection
 Urinary retention requiring reinsertion of urinary catheter, delaying discharge, or discharge with urinary catheter

- 10.5.1.1 **If 'Complication urologic type' is equal to 'Acute renal insufficiency (defined as doubling of baseline creatinine)' answer this question:**
- Acute renal insufficiency (defined as doubling of baseline creatinine) Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoid bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Acute renal insufficiency (defined as doubling of baseline creatinine)
- Acute renal failure requiring dialysis
- Urinary tract infection
- Urinary retention requiring reinsertion of urinary catheter, delaying discharge, or discharge with urinary catheter
-
- 10.5.1.2 **If 'Complication urologic type' is equal to 'Acute renal failure requiring dialysis' answer this question:**
- Acute renal failure (requiring dialysis) Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoid bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Acute renal insufficiency (defined as doubling of baseline creatinine)
- Acute renal failure requiring dialysis
- Urinary tract infection
- Urinary retention requiring reinsertion of urinary catheter, delaying discharge, or discharge with urinary catheter
-
- 10.5.1.3 **If 'Complication urologic type' is equal to 'Urinary tract infection' answer this question:**
- Urinary tract infection Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoid bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
- Grade II
- Grade IIIa
- Grade IIIb
- Grade IVa
- Grade IVb
- Grade V
-
- 10.5.1.4 **If 'Complication urologic type' is equal to 'Urinary retention requiring reinsertion of urinary catheter, delaying discharge, or discharge with urinary catheter' answer this question:**
- Urinary retention (requiring reinsertion of urinary catheter, delaying discharge, or discharge with urinary catheter) Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoid bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
- Grade II
- Grade IIIa
- Grade IIIb
- Grade IVa
- Grade IVb
- Grade V

10.6	<p>Complication thromboembolic</p> <p>Deep venous thrombosis</p> <p>Pulmonary embolus</p> <p>Stroke (CVA)</p> <p>Peripheral thrombophlebitis</p>	<input type="radio"/> No <input type="radio"/> Yes
10.6.1	<p>If 'Complication thromboembolic' is equal to 'Yes' answer this question:</p> <p>Complication thromboembolic type</p>	<input type="checkbox"/> Deep venous thrombosis <input type="checkbox"/> Pulmonary embolus <input type="checkbox"/> Stroke (CVA) <input type="checkbox"/> Peripheral thrombophlebitis
10.6.1.1	<p>If 'Complication thromboembolic type' is equal to 'Deep venous thrombosis' answer this question:</p> <p>Deep venous thrombosis claven dindo</p> <p>Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Deep venous thrombosis <input type="radio"/> Pulmonary embolus <input type="radio"/> Stroke (CVA) <input type="radio"/> Peripheral thrombophlebitis
10.6.1.2	<p>If 'Complication thromboembolic type' is equal to 'Pulmonary embolus' answer this question:</p> <p>Pulmonary embolus claven dindo</p> <p>Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Deep venous thrombosis <input type="radio"/> Pulmonary embolus <input type="radio"/> Stroke (CVA) <input type="radio"/> Peripheral thrombophlebitis
10.6.1.3	<p>If 'Complication thromboembolic type' is equal to 'Stroke (CVA)' answer this question:</p> <p>Stroke(CVA) claven dindo</p> <p>Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Grade I <input type="radio"/> Grade II <input type="radio"/> Grade IIIa <input type="radio"/> Grade IIIb <input type="radio"/> Grade IVa <input type="radio"/> Grade IVb <input type="radio"/> Grade V

- 10.6.1.4 **If 'Complication thromboembolic type' is equal to 'Peripheral thrombophlebitis' answer this question:**
- Peripheral thrombophlebitis clavién dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoid bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
- Grade II
- Grade IIIa
- Grade IIIb
- Grade IVa
- Grade IVb
- Grade V

- 10.7 Complication neurologic/psychiatric
- Recurrent nerve injury
- Vocal Cord Injury/Palsy
- Defined as: Vocal cord dysfunction post-resection. Confirmation and assessment should be by direct examination
- Type I: Transient injury requiring no therapy Dietary modification allowed
- Type II: Injury requiring elective surgical procedure, for example, thyroplasty or medialization procedure
- Type III: Injury requiring acute surgical intervention (due to aspiration or respiratory issues), for example, thyroplasty or medialization procedure Severity Level (A) Unilateral (B) Bilateral For example, a unilateral vocal cord injury requiring elective medialization procedure. Final Type IIA
- Other neurologic injury
- Acute delirium
- (Definition: Diagnostic and Statistical Manual of Mental Disorders, 5th ed)
- <https://www.ncbi.nlm.nih.gov/pubmed/25300023>
- Delirium tremens
- No
- Yes

- 10.7.1 **If 'Complication neurologic/psychiatric' is equal to 'Yes' answer this question:**
- Complication neurologic-psychiatric type
- Recurrent nerve injury*
- Other neurologic injury
- Acute delirium#
- Delirium tremens

10.7.1.1	<p>If 'Complication neurologic-psychiatric type' is equal to 'Recurrent nerve injury' answer this question: Recurrent nerve classification Defined as: Vocal cord dysfunction post-resection. Confirmation and assessment should be by direct examination</p>	<p><input type="radio"/> Type I: Transient injury requiring no therapy - Dietary modification allowed (A) Unilateral</p> <p><input type="radio"/> Type I: Transient injury requiring no therapy - Dietary modification allowed (B) Bilateral</p> <p><input type="radio"/> Type II: Injury requiring elective surgical procedure, for example, thyroplasty or medialization procedure (A) Unilateral</p> <p><input type="radio"/> Type II: Injury requiring elective surgical procedure, for example, thyroplasty or medialization procedure (B) Bilateral</p> <p><input type="radio"/> Type III: Injury requiring acute surgical intervention (due to aspiration or respiratory issues), for example, thyroplasty or medialization procedure (A) Unilateral</p> <p><input type="radio"/> Type III: Injury requiring acute surgical intervention (due to aspiration or respiratory issues), for example, thyroplasty or medialization procedure (B) Bilateral</p> <p><input type="radio"/> Unknown</p>
10.7.1.2	<p>If 'Complication neurologic-psychiatric type' is equal to 'Recurrent nerve injury' answer this question: Recurrent nerve injury clavien dindo Clavien dindo Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.</p>	<p><input type="radio"/> Grade I</p> <p><input type="radio"/> Grade II</p> <p><input type="radio"/> Grade IIIa</p> <p><input type="radio"/> Grade IIIb</p> <p><input type="radio"/> Grade IVa</p> <p><input type="radio"/> Grade IVb</p> <p><input type="radio"/> Grade V</p>
10.7.1.3	<p>If 'Complication neurologic-psychiatric type' is equal to 'Other neurologic injury' answer this question: Other neurologic injury type clavien dindo Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.</p>	<p><input type="radio"/> Grade I</p> <p><input type="radio"/> Grade II</p> <p><input type="radio"/> Grade IIIa</p> <p><input type="radio"/> Grade IIIb</p> <p><input type="radio"/> Grade IVa</p> <p><input type="radio"/> Grade IVb</p> <p><input type="radio"/> Grade V</p>

- 10.7.1.4 **If 'Complication neurologic-psychiatric type' is equal to 'Acute delirium#' answer this question:**
- Acute delirium clavién dindo (Definition: Diagnostic and Statistical Manual of Mental Disorders, 5th ed)
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V

- 10.7.1.5 **If 'Complication neurologic-psychiatric type' is equal to 'Delirium tremens' answer this question:**
- Delirium tremens clavién dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V

- 10.8 Complication infection
- Wound infection requiring opening wound or antibiotics
- Central IV line infection requiring removal or antibiotics
- Intrathoracic/intra-abdominal abscess
- Generalized sepsis (Definition: CDC)
- <https://www.ncbi.nlm.nih.gov/pubmed/?term=Definitions+for+sepsis+and+organ+failure+and+guidelines+for+the+use+of+innovative+therapies+in+sepsis.+The+ACCP%2FSCCM+Consensus+Conference+Committee.+American+College+of+Chest+Physicians%2FSociety+of+Critical+Care+Medicine.>
- Other infections requiring antibiotics
- No
 Yes

- 10.8.1 **If 'Complication infection' is equal to 'Yes' answer this question:**
- Complication infection type
- Wound infection requiring opening wound or antibiotics
- Central IV line infection requiring removal or antibiotics
- Intrathoracic/intra-abdominal abscess
- Generalized sepsis*
- Other infections requiring antibiotics

- 10.8.1.1 **If 'Complication infection type' is equal to 'Wound infection requiring opening wound or antibiotics' answer this question:**
- Wound infection (requiring opening wound or antibiotics) Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.8.1.2 **If 'Complication infection type' is equal to 'Central IV line infection requiring removal or antibiotics' answer this question:**
- Central IV line infection (requiring removal or antibiotics) Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.8.1.3 **If 'Complication infection type' is equal to 'Intrathoracic/intra-abdominal abscess' answer this question:**
- Intrathoracic/intra-abdominal abscess Clavien Dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.8.1.4 **If 'Complication infection type' is equal to 'Generalized sepsis' answer this question:**
- Generalized sepsis Clavien Dindo
- Clavien Dindo** Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgesics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V

10.8.1.5	<p>If 'Complication infection type' is equal to 'Other infections requiring antibiotics' answer this question: Other infections(requiring antibiotics) claven dindo</p> <p>Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications.Blood transfusionsand total parenteral nutritionare also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidalbleeding,but excluding transient ischemic attacks (TIA);IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Grade I <input type="radio"/> Grade II <input type="radio"/> Grade IIIa <input type="radio"/> Grade IIIb <input type="radio"/> Grade IVa <input type="radio"/> Grade IVb <input type="radio"/> Grade V
10.9	<p>Complication wound/diaphragm Thoracic wound dehiscence</p> <p>Acute abdominal wall dehiscence/hernia</p> <p>Acute diaphragmatic hernia</p>	<input type="radio"/> No <input type="radio"/> Yes
10.9.1	<p>If 'Complication wound/diaphragm' is equal to 'Yes' answer this question: Complication wound/diaphragm type</p>	<input type="checkbox"/> Thoracic wound dehiscence <input type="checkbox"/> Acute abdominal wall dehiscence/hernia <input type="checkbox"/> Acute diaphragmatic hernia
10.9.1.1	<p>If 'Complication wound/diaphragm type' is equal to 'Thoracic wound dehiscence' answer this question: Thoracic wound dehiscence claven dindo</p> <p>Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications.Blood transfusionsand total parenteral nutritionare also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidalbleeding,but excluding transient ischemic attacks (TIA);IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Grade I <input type="radio"/> Grade II <input type="radio"/> Grade IIIa <input type="radio"/> Grade IIIb <input type="radio"/> Grade IVa <input type="radio"/> Grade IVb <input type="radio"/> Grade V
10.9.1.2	<p>If 'Complication wound/diaphragm type' is equal to 'Acute abdominal wall dehiscence/hernia' answer this question: Acute abdominal wall dehiscence/hernia claven dindo</p> <p>Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.</p> <p>Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications.Blood transfusionsand total parenteral nutritionare also included.</p> <p>Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia</p> <p>Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia</p> <p>Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)</p> <p>Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction</p> <p>Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidalbleeding,but excluding transient ischemic attacks (TIA);IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Grade I <input type="radio"/> Grade II <input type="radio"/> Grade IIIa <input type="radio"/> Grade IIIb <input type="radio"/> Grade IVa <input type="radio"/> Grade IVb <input type="radio"/> Grade V

10.9.1.3	<p>If 'Complication wound/diaphragm type' is equal to 'Acute diaphragmatic hernia' answer this question: Diaphragmatic hernia clavien dindo Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside. Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included. Grade IIIa: Requiring surgical, endoscopic or radiological intervention . Intervention not under general anesthesia Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis) Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.</p>	<input type="radio"/> Grade I <input type="radio"/> Grade II <input type="radio"/> Grade IIIa <input type="radio"/> Grade IIIb <input type="radio"/> Grade IVa <input type="radio"/> Grade IVb <input type="radio"/> Grade V
10.10	<p>Complication other -Chyle leak. Type I: Treatment—enteric dietary modifications Type II: Treatment—total parenteral nutrition Type III: Treatment—interventional or surgical therapy* Severity Level (A) <1 liter output/day (B) >1 liter output/day -Reoperation for reasons other than bleeding, anastomotic leak, or conduit necrosis -Multiple organ dysfunction syndrome (Multiple organ dysfunction syndrome : presence of altered organ function in an acutely ill patient such that homeostasis cannot be maintained without intervention)</p>	<input type="radio"/> No <input type="radio"/> Yes
10.10.1	<p>If 'Complication other' is equal to 'Yes' answer this question: Complication other types</p>	<input type="checkbox"/> Chyle leak.* <input type="checkbox"/> Reoperation for reasons other than bleeding, anastomotic leak, or conduit necrosis <input type="checkbox"/> Multiple organ dysfunction syndrome #
10.10.1.1	<p>If 'Complication other types' is equal to 'Chyle leak.*' answer this question: Complication_other_chyle_class</p>	<input type="radio"/> Type I: Treatment—enteric dietary modifications (A) <1 liter output/day <input type="radio"/> Type I: Treatment—enteric dietary modifications (B) >1 liter output/day <input type="radio"/> Type II: Treatment—total parenteral nutrition (A) <1 liter output/day <input type="radio"/> Type II: Treatment—total parenteral nutrition (B) >1 liter output/day <input type="radio"/> Type III: Treatment—interventional or surgical therapy (A) <1 liter output/day <input type="radio"/> Type III: Treatment—interventional or surgical therapy (B) >1 liter output/day <input type="radio"/> Unknown

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- 10.10.1.2 **If 'Complication other types' is equal to 'Chyle leak.*' answer this question:**
- Chyle leak clavien
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.10.1.3 **If 'Complication other types' is equal to 'Reoperation for reasons other than bleeding, anastomotic leak, or conduit necrosis' answer this question:**
- Reoperation (for reasons other than bleeding, anastomotic leak, or conduit necrosis) clavien dindo
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V
-
- 10.10.1.4 **If 'Complication other types' is equal to 'Multiple organ dysfunction syndrome #' answer this question:**
- Multiple organ dysfunction syndrome clavien dindo
- MODS** presence of altered organ function in an acutely ill patient such that homeostasis cannot be maintained without intervention.
- Grade I: Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic and radiological interventions. Allowed therapeutic regimens are: drugs as anti-emetics, antipyretics, analgetics, diuretics and electrolytes and physiotherapy. This grade also includes wound infections opened at the bedside.
- Grade II: Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition are also included.
- Grade IIIa: Requiring surgical, endoscopic or radiological intervention. Intervention not under general anesthesia
- Grade IIIb: Requiring surgical, endoscopic or radiological intervention. Intervention under general anesthesia
- Grade IVa: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Single organ dysfunction (including dialysis)
- Grade IVb: Life-threatening complication (including CNS complications)* requiring IC/ICU-management, with Multi Organ Dysfunction
- Grade V: Death of a patient *brain hemorrhage, ischemic stroke, subarachnoidal bleeding, but excluding transient ischemic attacks (TIA); IC: Intermediate care; ICU: Intensive care unit.
- Grade I
 Grade II
 Grade IIIa
 Grade IIIb
 Grade IVa
 Grade IVb
 Grade V