

Appendix – Case Report Form (CRF)

AL-CODS Study ALgerian Cholecystectomy Outcomes and Determinants Study

1. Demographic Information

- **Patient identification :** _____
 - **Patient ID Number:** AL-CODS- _____
 - **Age:** _____
 - **Sex:** ☐ Male ☐ Female
 - **Weight (kg):** _____
 - **Height (cm):** _____
 - **BMI:** _____
 - **Clinical Performance Scale (1–4):** _____
 - **Region of Residence (Wilaya):** _____
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2. Admission Details

- **Hospitalization Type:** ☐ Emergency ☐ Elective
 - **Number of hospitalizations prior to surgery:** _____
 - **Indication for cholecystectomy:**
 - ☐ Biliary colic ☐ Acute cholecystitis (Date: / /)
 - ☐ Common bile duct stones ☐ Cholangitis
 - ☐ Biliary pancreatitis (Date: / /)
 - Severity: ☐ Mild ☐ Moderate ☐ Severe (Atlanta classification)
 - ☐ Gallbladder polyp ☐ Gallbladder dyskinesia ☐ Other: _____
 - **Cholecystitis severity (Tokyo classification):**
 - ☐ No cholecystitis ☐ Grade 1 ☐ Grade 2 ☐ Grade 3
 - **ASA Classification:** ☐ I ☐ II ☐ III ☐ IV
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3. Medical History

- ☐ Diabetes (on treatment)
- ☐ Hypertension ☐ Myocardial infarction ☐ COPD ☐ Asthma
- ☐ Hypothyroidism ☐ Stroke ☐ Chronic kidney disease
- ☐ Heart failure ☐ Long-term corticosteroid use ☐ Chemotherapy
- ☐ Corticoid prescription ☐ Liver cirrhosis ☐ Anticoagulant use
- ☐ Smoking:
 - ☐ Active (<12 months) ☐ Former (>12 months) ☐ Never

☐ Other: _____

- **History of abdominal surgery:**
☐ None ☐ Open surgery ☐ Laparoscopy
 - **History of ERCP:** ☐ Yes (Date: / /) ☐ No
 - **Gallbladder drainage performed:** ☐ Yes (Date: / /) ☐ No
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4. Preoperative Workup

- **Imaging performed preoperatively:**
☐ Ultrasound ☐ CT scan ☐ MRI
 - **Findings:**
☐ Cholecystitis ☐ Pericholecystic collection
☐ Suspicious gallbladder (possible malignancy)
☐ Common bile duct (CBD) diameter measured:
☐ Yes → Diameter: _____ mm ☐ Not specified
☐ CBD stones present
 - **Laboratory Results:**
WBC: _____/ml Hemoglobin: _____ g/dL
Creatinine: _____ mg/L CRP: _____ mg/L
Prothrombin Time (PT): _____% Total bilirubin: _____ mg/L

ALAT: _____ ui ASAT: _____ ui Glycemia: _____ g/L
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5. Surgical Data

- **Surgery Date:** / /
- **Duration (min):** _____
- **Primary Operator:** ☐ Surgeon ☐ Surgical resident
- **Surgical Approach:**
☐ Laparoscopic cholecystectomy
☐ Laparoscopic converted to open
☐ Open (conventional)
☐ Robot-assisted
- **Number of trocars used:** _____ (1–5)
- **Critical View of Safety (CVS) completion:**
☐ Cystic artery identified before division
☐ Cystic duct identified before division
☐ Lower third of gallbladder bed cleared before division
- **Reason for conversion (if applicable):**
☐ No conversion ☐ Lack of progress ☐ Adhesions ☐ Bleeding
☐ Suspected bile duct injury ☐ Other: _____

- **Extent of cholecystectomy:**
☐ Total ☐ Partial ☐ None (infeasible)
 - **Cystic duct and artery controlled first:** ☐ Yes ☐ No
 - **Operative difficulty (Nassar scale):** ☐ Grade 1 ☐ Grade 2 ☐ Grade 3 ☐ Grade 4
 - **Intraoperative exploration:**
☐ Routine cholangiography ☐ Selective cholangiography
☐ Choledochoscopy ☐ ERCP
☐ Trans-cystic instrumentation ☐ Choledochotomy instrumentation
☐ Indocyanine green fluorescence
 - **If choledochotomy performed:**
☐ CBD closure ☐ Kehr drain placement ☐ None
 - **Cystic duct closure method:** ☐ Clips ☐ Sutures ☐ Other: _____
 - **Cystic artery ligation method:** ☐ Clips ☐ Sutures ☐ Other: _____
 - **Drain placement (exclude Kehr drain):**
☐ None ☐ Yes – 1 drain ☐ Yes – 2 drains
 - **Gallbladder extraction:**
☐ With retrieval bag ☐ Without retrieval bag
 - **Peritoneal contamination:**
By bile: ☐ Yes ☐ No By stones: ☐ Yes ☐ No
 - **Other incidents:**
☐ Hemorrhage ☐ Bile duct injury ☐ Digestive tract injury ☐ Other: _____
 - **Same-day surgery (<12h admission):** ☐ Yes ☐ No
 - **Postoperative antibiotic therapy:** ☐ Yes ☐ No
 - **Postoperative transfusion (units):** _____ (0–10)
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6. Postoperative Outcomes

- **Length of hospital stay (days):** _____
- **ICU stay (days):** _____ (0 if not applicable)
- **30-day imaging/ERCP follow-up performed:**
☐ No ☐ Ultrasound ☐ CT ☐ MRI ☐ ERCP
- **30-day readmission:** ☐ Yes ☐ No
- **30-day mortality:** ☐ Yes ☐ No (Date: //____)
- **Complications present:**
☐ None ☐ Grade 1 ☐ Grade 2 ☐ Grade 3A ☐ Grade 3B
☐ Grade 4A ☐ Grade 4B ☐ Grade 5 (death)
- **Type of complication:**
☐ None ☐ External biliary fistula ☐ Biloma ☐ Bile duct injury
☐ Biliary peritonitis ☐ Hemorrhage ☐ Wound infection
☐ Pulmonary embolism ☐ Other: _____
- **If bile duct injury occurred:**
☐ No ☐ Yes, recognized intraoperatively ☐ Yes, recognized postoperatively

- **Strasberg classification of bile duct injury (if applicable):**
☐ A ☐ B ☐ C ☐ D ☐ E1 ☐ E2 ☐ E3 ☐ E4 ☐ E5

7. Histopathology Report

- **Gallbladder cancer present:** ☐ No ☐ Yes
- **Histological type (if cancer):**
 - ☐ Adenocarcinoma ☐ Neuroendocrine carcinoma
 - ☐ Adenosquamous carcinoma ☐ Squamous carcinoma
 - ☐ Other: _____
- **Differentiation:** ☐ Well ☐ Moderate ☐ Poorly
- **Tumor Stage (TNM):**
 - T: ☐ Tis ☐ T1a ☐ T1b ☐ T2a ☐ T2b ☐ T3 ☐ T4
 - N: ☐ X ☐ 0 ☐ + M: ☐ X ☐ 0 ☐ +
- **Surgical margins:** ☐ R0 ☐ R1 ☐ R2 ☐ Not specified

8. Additional Information (Optional)

Free Text (max 300 characters):