



## Submission Information

### Submission ID\* \_\_\_\_\_

This ID links the donor and the recipient IDs. No patient or center identifiers allowed. Use our random ID generator available at: <https://ldltregistry.org/conversions>. Please also use our Submission and ID database template to link the patient hospital numbers with their IDs: [https://ldltregistry.org/sites/default/files/ID\\_Database.xlsx](https://ldltregistry.org/sites/default/files/ID_Database.xlsx)

## Donor Characteristics

### Donor ID\* \_\_\_\_\_

Please assign a unique donor identification number. No patient or center identifiers allowed. Use our Submission and ID database template to link the patient hospital numbers with their IDs: [https://ldltregistry.org/sites/default/files/ID\\_Database.xlsx](https://ldltregistry.org/sites/default/files/ID_Database.xlsx)

**Donor age** \_\_\_\_\_ years | **Donor sex**  Male  Female

**Donor height** \_\_\_\_\_ cm | **Donor weight** \_\_\_\_\_ kg

Use our conversion calculator at: <https://ldltregistry.org/conversions>

**Donor country of residence** \_\_\_\_\_

**Donor ethnicity**  Caucasian  Latino/Hispanic  
 Middle Eastern  African  Caribbean  South Asian  
 East Asian  Mixed

**Donor relationship to the recipient**  1<sup>st</sup> degree

2<sup>nd</sup> degree  3<sup>rd</sup> degree  No relation  
 Altruistic directed  Altruistic non-directed  
 Unknown  Other \_\_\_\_\_

1<sup>st</sup> degree: Parents, siblings, children. 2<sup>nd</sup> degree: Grandparents, grandchildren, aunts, uncles, half-siblings. 3<sup>rd</sup> degree: first cousins.

**Donor comorbidities (multiple options)**  None

Asthma  Hypertension  Hyperthyroidism  
 Hypothyroidism  Diabetes  Non-alcoholic fatty liver disease (NAFLD)  Other: \_\_\_\_\_

**Donor smoking status**  Not a smoker

Previous smoker  Current smoker  Unknown

**Donor pack years smoking history** \_\_\_\_\_ pack years

Use our pack year calculator available at: <https://ldltregistry.org/conversions>

**Known carrier of blood borne viruses (multiple options)**

None known  HIV  HBV  HCV  Other \_\_\_\_\_

**Donor blood group**  A  B  AB  O

**Donor Rhesus antigen status**  Pos. (+)  Neg. (-)

**Donor ASA Status**  ASA 1 - A normal healthy patient

ASA 2 - A patient with mild systemic disease

ASA 3 - A patient with severe systemic disease

**Donor Performance Status Score used**

ECOG/WHO Score  Karnofsky Score  No score

If a performance score is used for the donor, specify the grade below.

For more information visit: <https://ldltregistry.org/performance>

**ECOG/WHO donor performance status score**

0 - Asymptomatic  
 1 - Symptomatic but completely ambulatory  
 2 - Symptomatic, <50% in bed during the day  
 3 - Symptomatic, >50% in bed, but not bedbound

For more information follow: <https://ldltregistry.org/performance>

**Karnofsky donor performance status score**

100 - Normal; no complaints; no evidence of disease.  
 90 - Able to carry on normal activity; minor signs of disease.  
 80 - Normal activity with effort; some signs of disease.  
 70 - Cares for self; unable to carry on normal activity  
 60 - Requires occasional assistance  
 50 - Requires considerable assistance and medical care

For more information follow: <https://ldltregistry.org/performance>

**Donor previous abdominal surgery**  None

Laparoscopic  Laparotomy  Other \_\_\_\_\_

## Donor Workup

**Donor prehabilitation program (multiple options)**

None  Weight loss targets  Nutritional optimization  
 Exercise program  Psychological support  
 Smoking cessation  Alcohol cessation  Other \_\_\_\_\_

**Donor preoperative investigations (multiple options)**

Electrocardiogram (ECG)  Echocardiogram  
 Lung function testing  Chest X-ray (CXR)  
 Exercise capacity testing  Myocardial stress testing  
 CPET and 6 min walk test  Other \_\_\_\_\_

**Donor preoperative mental health status (multiple options)**

Not assessed  Anxiety disorders  Depression  
 Post-Traumatic Stress Disorder (PTSD)  Schizophrenia  
 Bipolar disorder  Eating disorders  
 Disruptive behaviour and dissociative disorders  
 Neurodevelopmental disorders  Deliberate self-harm  
 Suicidal ideation  Other \_\_\_\_\_

**Donor preoperative laboratory work up (multiple options)**

Full blood count  Renal profile  Liver profile  
 Lipid profile  Coagulation profile  anti-HBc  
 Autoimmune markers  Other \_\_\_\_\_

**Hb of the donor preoperatively** \_\_\_\_\_ g/dL

Hb: Hemoglobin. Normal range: 12.1 to 17.2 g/dL Use our conversion calculator from  $\mu\text{mol/l}$  to g/d at <https://ldltregistry.org/conversions>

**Platelets of the donor preoperatively** \_\_\_\_\_  $10^9/\text{L}$

Normal range: 150 to 450 x 10<sup>9</sup>/L

**INR of the donor preoperatively** \_\_\_\_\_ ratio

INR: International normalized ratio

**Na of the donor preoperatively** \_\_\_\_\_ mmol/L

Na: Sodium. Norm: 135-145 mmol/L.

**K of the donor preoperatively** \_\_\_\_\_ mmol/L

K: Potassium. Norm: 3.5 - 5.3 mmol/l.

**Creatinine of the donor preoperatively** \_\_\_\_\_  $\mu\text{mol/L}$

Norm: 62-115  $\mu\text{mol/L}$ . Use our unit conversion calculator from mg/dL to  $\mu\text{mol/l}$  at <https://ldltregistry.org/conversions>

**AST of the donor preoperatively** \_\_\_\_\_ IU/L

AST: Aspartate aminotransferase

**ALT of the donor preoperatively** \_\_\_\_\_ IU/L

ALT: Alanine aminotransferase

**Bilirubin of the donor preoperatively** \_\_\_\_\_  $\mu\text{mol/L}$

Norm: 5 - 32  $\mu\text{mol/L}$ . Use our conversion calculator from mg/dL to  $\mu\text{mol/l}$  at <https://ldltregistry.org/conversions>,

**Donor preoperative imaging (multiple options)**

Computed tomography (CT)  
 Magnetic resonance imaging (MRI)  
 Magnetic resonance cholangiopancreatography (MRCP)  
 Abdominal ultrasound  Liver FibroScan  
 Other \_\_\_\_\_

**Liver attenuation index on CT if calculated** \_\_\_\_\_ HU

**Volumetry / 3D reconstruction software used**

Yes  No | Name of software used \_\_\_\_\_

*Continued next page...*



**Donor Workup continued...**

**Donor estimated total liver volume (TLV)** \_\_\_\_\_ CC(cm3)  
**Donor estimated graft size** \_\_\_\_\_ CC (cm3)  
**Donor estimated remnant liver volume (RLV)** \_\_\_\_\_ %  
**Remnant to total liver volume (RLV/TLV)** \_\_\_\_\_ ratio  
**Donor preoperative liver biopsy**  Yes  No  
**Donor preoperative liver biopsy approach**  
 Transjugular  Transcutaneous  
**Donor preoperative liver biopsy histopathology report?**  
\_\_\_\_\_  
\_\_\_\_\_

**Planned donor operation**

Left lobe (LL)  Left lobe with caudate lobe (LL+S1)  
 Left lateral segment (LLS)  Right lobe (RL)  
 Right lobe with middle hepatic vein (RL+MHV)  
 Right posterior sector (RPS)  Other \_\_\_\_\_

**Preoperative multidisciplinary discussion comments**

\_\_\_\_\_  
\_\_\_\_\_

**Donor Operation Characteristics**

**Actual donor hepatectomy performed**

Left lobe (LL)  Left lobe with caudate lobe (LL+S1)  
 Left lateral segment (LLS)  Right lobe (RL)  
 Right lobe with middle hepatic vein (RL+MHV)  
 Right posterior sector (RPS)  None  
 Other \_\_\_\_\_

**Approach to donor hepatectomy**

Open  Laparoscopic  Laparoscopic converted to open  
 Robotic  Robotic converted to laparoscopic  
 Robotic converted to open  None  Other \_\_\_\_\_

**Type of donor abdominal incision (if open)**

Midline  Inverted L  J-shaped  Roof top  
 Mercedes  Other \_\_\_\_\_

**Number of ports (if minimally invasive)** \_\_\_\_\_ ports

**Intraoperative graft weight** \_\_\_\_\_ grams

**Intraoperative graft volume (if measured)** \_\_\_\_\_ ml

**Number of graft hepatic arteries** \_\_\_\_\_ artery stumps

**Number of graft hepatic veins** \_\_\_\_\_ vein stumps

**Number of graft portal veins** \_\_\_\_\_ vein stumps

**Donor portal vein type**

Type I – bifurcation  Type II – trifurcation  
 Type III - independent right posterior segmental portal  
branching from the main portal vein  Other \_\_\_\_\_

**Number of graft bile ducts** \_\_\_\_\_ duct stumps

**Venous reconstruction of the graft performed**

None  Reconstruction without graft  Autologous  
graft  Cadaveric graft  Synthetic material  
 Other \_\_\_\_\_

**Describe briefly the type of venous reconstruction**

\_\_\_\_\_

**Arterial reconstruction of the graft performed**

Reconstruction without graft  Autologous graft   
Cadaveric graft  Synthetic material  Other \_\_\_\_\_

**Describe briefly the type of arterial reconstruction**

\_\_\_\_\_

**Operation duration** \_\_\_\_\_ min

**Intraoperative donor liver biopsy performed**  Yes  No  
**Intraoperative donor liver biopsy histopath. report?** \_\_\_\_\_

**Intraoperative donor adverse events**  None  Grade 1  
 Grade 2  Grade 3  Grade 4  Grade 5  Other \_\_\_\_\_

*For more information please visit: <https://ldltregistry.org/IAE>*

**Describe the donor intraoperative adverse event** \_\_\_\_\_

**Donor surgical drain insertion**  None

Yes: *type of drain* \_\_\_\_\_

**Estimated donor intraoperative blood loss** \_\_\_\_\_ ml

**Donor graft WIT** \_\_\_\_\_ min. **Donor graft CIT** \_\_\_\_\_ min

**Donor Anesthesia Characteristics**

**Donor ERAS pathway**  Yes  No

*Does your institution have an established ERAS pathway for living liver donors including peri- and postoperative interventions? If yes, did this donor enter the ERAS pathway?*

**Donor transfusion practice based on viscoelastic testing**

Yes  No  Other \_\_\_\_\_

*(E.g. TEG: Thromboelastogram. ROTEM: Rotation thromboelastometry)*

**Transfusion with blood products**  Yes  No

**Autologous blood** \_\_\_\_\_ ml

**Transfusion with cell salvage** \_\_\_\_\_ ml

**Blood transfusion with packed red cells** \_\_\_\_\_ units

**Platelets** \_\_\_\_\_ pools | **Fresh frozen plasma (FFP)** \_\_\_\_\_ units

**Cryoprecipitate** \_\_\_\_\_ units | **Fibrinogen** \_\_\_\_\_ mg

**Donor analgesic approach used**  Spinal

Epidural – thoracic  Epidural – lumbar  Intravenous

Trunk nerve block  Other \_\_\_\_\_

**Donor neuroaxial block drugs used (if any)**  Bupivacaine

Diamorphine  Morphine  Fentanyl  Other \_\_\_\_\_

**Donor trunk nerve block method (if any)**

Transversus abdominis plane (TAP) blocks (US assisted)

Erector Spinae  Local anesthetic infiltration

Rectus sheath catheters  Other \_\_\_\_\_

**Donor intravenous analgesia used**  Dexmedetomidine

Ketamine  non-steroidal anti-inflammatory drugs (NSAID)

Paracetamol / Acetaminophen  Lidocaine  Clonidine

Fentanyl  Remifentanyl  Morphine  Oxycodone

Alfentanil  Other \_\_\_\_\_

**Donor oral analgesia adjuncts used**  Gabapentin

Pregabalin  Other \_\_\_\_\_

**Donor diclofenac patches**  Yes  No

**Donor nicotine patches**  Yes  No

**Donor anesthesia approach**

Total intravenous anesthesia (TIVA)  Volatile anesth.

**Donor invasive access sited (multiple options)**

Arterial line  Central venous catheter (CVC) lines

Peripheral cannula  Nasogastric tube (NG)

Rapid infusor  Large bore peripheral access  Other \_\_\_\_\_

**Donor arterial line sited**  Radial  Brachial

Femoral  Other \_\_\_\_\_

**Donor anesthetic cardiovascular monitoring**

Cardiac output monitoring - minimally invasive

Cardiac output monitoring – invasive

Electroencephalogram (EEG) based depth of anesthesia monitoring

Other \_\_\_\_\_

**Donor administered fluid intraoperatively**

0.9% saline  Balanced salt solution

Colloids, excluding albumin  Other \_\_\_\_\_

**Total volume of the above fluids administered** \_\_\_\_\_ ml

**Donor administered albumin intraop.**  Yes  No

**Total volume of albumin administered** \_\_\_\_\_ ml

**Donor on-table extubation**  Yes  No



### Donor Postoperative Characteristics until Hospital Discharge

#### Donor postoperative location

- Intensive care unit (ICU)  Monitored unit (IMC/HDU)
- Ward / floor. **Length of ICU/IMC/HDU stay** \_\_\_\_\_ days

IMC: Intermediate care unit HDU: High dependency unit

#### Donor visual analogue scale (VAS) pain score at day 1 postop at rest \_\_\_\_\_ points

Please report VAS scores on a scale of 0 to 10 at day 1 postop. To convert other types of scales into 0-10 follow: <https://ldltregistry.org/VAS>

#### Donor postop peak AST (up to day 2 postop) \_\_\_\_\_ IU/L

AST: Aspartate aminotransferase

#### Donor postop peak ALT (up to day 2 postop) \_\_\_\_\_ IU/L

ALT: Alanine aminotransferase

#### Donor postop peak bilirubin (up to day 3 postop) \_\_\_\_\_ µmol/L

Typical normal ranges 3-25 (µmol/l). To use our bilirubin conversion calculator from mg/dL to µmol/l follow: <https://ldltregistry.org/conversions>

#### Donor postoperative peak INR \_\_\_\_\_ ratio

INR: International normalized ratio

#### Donor postoperative peak lactate \_\_\_\_\_ mmol/L

#### Donor complications types and grades according to the Clavien-Dindo Classification until hospital discharge\*

Complication type	No	1	2	3a	3b	4a	4b	5
Abdominal wall dehiscence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bile leak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biliary stricture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biloma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bowel obstruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiac	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deep vein thrombosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gastrointestinal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intra-abdominal fluid collection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neurologic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pleural effusion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Portal vein stenosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Portal vein thrombosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postoperative bleeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulmonary embolism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Renal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respiratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small for size syndrome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surgical site infection (SSI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Urinary tract infection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other infection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other complication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For more information regarding the Clavien-Dindo classification of postoperative complications follow: <https://ldltregistry.org/complications>

### Describe below other types and grades of postoperative complications \_\_\_\_\_

Ensure to specify other types as well as their corresponding grades of postoperative complications according to the Clavien-Dindo Classification. See <https://ldltregistry.org/complications> for more info.

#### If grade 3a/3b donor complication, type of intervention

- Radiological  Endoscopic  Surgical
- Other \_\_\_\_\_

#### Postoperative day of removal of surgical drain \_\_\_\_\_

#### Donor length of hospital stay until discharge \_\_\_\_\_ days

Use our date duration calculator at: <https://ldltregistry.org/conversions>

### Donor Postoperative Outcomes from Discharge up until 1 Year of follow up

Please report all complications from hospital discharge up to 12 months postoperatively excluding those already stated above (i.e. those during hospitalization). This section may be completed in retrospect when the donor reached 1 year of follow up. You will be able to search for this submission and edit it in the future.

#### Donor complications from hospital discharge until 12 months of follow up 12 month follow up not complete yet

- Yes  No  Unknown / no follow up

#### Please list the types and grades of complications as well as the postoperative day they were diagnosed

E.g., 1 Type of complication | Grade | Postoperative day

#### Donor hospital readmission until 12 months postoperatively 12 month follow up not complete yet

- Yes  No  Unknown / lost to follow up

#### Specify the reason and postoperative day of hospital readmission \_\_\_\_\_

#### Post-donation mental health status within 1 year of follow up Not assessed Lost to follow up

- Anxiety disorders  Post-Traumatic Stress Disorder (PTSD)
- Depression  Schizophrenia  Bipolar disorder
- Eating disorders  Disruptive behaviour and dissocial disorders
- Neurodevelopmental disorders  Deliberate self-harm
- Suicidal ideation  Other \_\_\_\_\_

### Donor submission data completion

- Donor data complete until hospital discharge
- Donor data complete until 1 year of follow up

#### Comments regarding the donor case submission (optional) \_\_\_\_\_

You have now reached the end of the Donor Case Report Form (CRF). You may now proceed filling out the Recipient CRF. You may also transfer the data to our electronic CRF (eCRF), first login and then submit to <https://ldltregistry.org/eCRF>. You may search and edit your submissions at any time by following the "My submitted cases" link.





## Recipient Characteristics

**Recipient ID\*** \_\_\_\_\_

Please assign a unique recipient identification number. No patient or center identifiers allowed. Use our Submission and ID database template to link the patient hospital numbers with their IDs:

[https://ldltregistry.org/sites/default/files/ID\\_Database.xlsx](https://ldltregistry.org/sites/default/files/ID_Database.xlsx)

**Recipient age** \_\_\_\_\_ years | **Recipient sex**  Male  Female

**Recipient height** \_\_\_\_\_ cm | **Recipient weight** \_\_\_\_\_ kg

Use our conversion calculator at: <https://ldltregistry.org/conversions>

**Recipient country of residence** \_\_\_\_\_

**Recipient ethnicity**  Caucasian  Latino/Hispanic  
 Middle Eastern  African  Caribbean  South Asian  
 East Asian  Mixed

**Recipient time on the waiting list in days** \_\_\_\_\_ days

Time from listing to transplant in days. Visit the link to use our date duration calculator: <https://ldltregistry.org/conversions>

**Type of recipient liver failure**  Acute liver failure (ALF)

Acute-on-chronic liver failure (ACLF)  
 Chronic liver failure (CLF)  Other \_\_\_\_\_

**If ALF, etiology of liver failure**

Paracetamol / Acetaminophen  Drug induced  
 Autoimmune hepatitis  Viral hepatitis  Metabolic  
 Indeterminate  Other \_\_\_\_\_

**If ACLF, CLIF-C ACLF score** \_\_\_\_\_ points

To use the CLIF-C ACLF score calculator visit: <https://shorturl.at/kolJ2>

For more information about the CLIF-C ACLF score visit:

<https://shorturl.at/zAPY1>

**Indication for liver transplantation (if not ALF)**

Alcoholic liver disease  Infectious hepatitis  
 Non-alcoholic fatty liver disease (NAFLD)  
 Metabolic liver disease  Cholestatic liver disease  
 Autoimmune hepatitis  Cancer  Budd-Chiari Syndrome  
 Other \_\_\_\_\_

Metabolic liver disease: E.g. hereditary hemochromatosis, Alpha-1 antitrypsin deficiency (AATD), Wilson Disease  
NAFLD includes non-alcoholic steatohepatitis (NASH).

**Recipient comorbidities**  Coronary artery disease

Cardiomyopathy  Valvular heart disease  
 Atrial fibrillation (AF)  Diabetes mellitus  
 Metastatic cancer  Stroke  COPD  Asthma  
 Autoimmune disease  Hepatocellular carcinoma (HCC)  
 Other \_\_\_\_\_

**If Coronary Artery Disease, time from recipient coronary intervention until transplantation** \_\_\_\_\_ days

Leave blank if no coronary intervention. Use our date duration calculator:

<https://ldltregistry.org/conversions>

**If stented, number of stents** \_\_\_\_\_ stents

Leave blank if no stenting

**If history of coronary artery bypass graft (CABG), time from CABG until transplantation** \_\_\_\_\_ days

Leave blank if no CABG. Use our date duration calculator:

<https://ldltregistry.org/conversions>

**Recipient ASA Status**  ASA 1 - A normal healthy patient

ASA 2 - A patient with mild systemic disease  
 ASA 3 - A patient with severe systemic disease  
 ASA 4 - A patient with severe systemic disease with a constant threat to life  
 ASA 5 - A moribund patient not expected to survive without the op.

**Recipient Performance Status Score used**

ECOG/WHO score  Karnofsky score  
 Lansky score (pediatric)  No score used

For more information visit: <https://ldltregistry.org/performance>

**ECOG/WHO recipient performance status score (if performed)**

- 0 – Asymptomatic  
 1 – Symptomatic but completely ambulatory  
 2 – Symptomatic, <50% in bed during the day  
 3 – Symptomatic, >50% in bed, but not bedbound  
 4 – Bedbound (completely disabled, no self-care)

For more information visit : <https://ldltregistry.org/performance>

**Karnofsky recipient performance status score (if performed)**

- 100–Normal; no complaints; no evidence of disease.  
 90–Able to carry on normal activity; minor signs of disease.  
 80–Normal activity with effort; some signs of disease.  
 70–Cares for self; unable to carry on normal activity  
 60–Requires occasional assistance  
 50–Requires considerable assistance and medical care  
 40–Disabled; requires special care and assistance.  
 30–Severely disabled; hospital admission is indicated, death not imminent.  
 20–Very sick; hospital admission necessary; active supportive treatment.  
 10 – Moribund; fatal processes progressing rapidly.

For more information visit: <https://ldltregistry.org/performance>

**Lansky recipient score (pediatric) (if performed)**

- 100 – Fully active, normal  
 90 – Minor restrictions in strenuous physical activity  
 80 – Active, but gets tired more quickly  
 70 – Greater restriction of play and less time spent in play activity  
 60 – Up and around, but active play minimal.  
 50 – Lying around much of the day, but gets dressed;  
 40 – Mainly in bed; participates in quiet activities  
 30 – Bedbound; needing assistance even for quiet play  
 20 – Sleeping often; play entirely limited to very passive activities  
 10 – Doesn't play; does not get out of bed  
 0 – Unresponsive

For more information visit: <https://ldltregistry.org/performance>

**Recipient carrier of blood borne viruses**

None  HIV  HBV  HCV  Other \_\_\_\_\_

**Recipient previous abdominal surgery\***

None  Laparoscopy  Laparotomy  Other \_\_\_\_\_

**Recipient blood group**  A  B  AB  O

**Recipient Rhesus antigen status**  Pos. (+)  Neg. (-)

**Life support prior to transplantation**  None

- Dialysis at least twice in the past week  
 Ventilation prior to transplantation  
 Vasopressors prior to transplantation

**Creatinine of the recipient prior to transplant** \_\_\_\_\_ μmol/L

Norm: 62-115 μmol/L. Use our unit conversion calculator from mg/dL to μmol/l at <https://ldltregistry.org/conversions>

**Bilirubin of the recipient prior to transplant** \_\_\_\_\_ μmol/L

Norm: 5 - 32 μmol/L. Use our conversion calculator from mg/dL to μmol/l at <https://ldltregistry.org/conversions>,

**INR of the recipient prior to transplant** \_\_\_\_\_ ratio

INR: International normalized ratio

**Sodium of the recipient prior to transplant** \_\_\_\_\_ mmol/L

INR: International normalized ratio

**Albumin of the recipient prior transplant** \_\_\_\_\_ g/L

Norm: 35 - 55 g/L.

**Graft-to-recipient weight ratio (GRWR)** \_\_\_\_\_ %



### Recipient Operation Characteristics

#### Type of living donor liver transplantation (LDLT)

- Standard  RAPID  APOLT  ASPIRE  RAVAS
- Other \_\_\_\_\_

*Domino grafts are excluded.*

#### If two stage liver transplant, days from stage 1 to stage 2 \_\_\_\_\_ days

*If two stage liver transplant, the following parameters refer to stage 1 and outcomes should be reported as overall, including both stages until hospital discharge.*

Anhepatic time \_\_\_\_\_ min

- Venous jump graft  None  Autologous  Cadaveric
- Synthetic  Other \_\_\_\_\_

Recipient number of portal vein anastomoses \_\_\_\_\_ #

Recipient number of hepatic artery anastomoses \_\_\_\_\_ #

- Arterial conduit  None  Autologous  Cadaveric
- Synthetic  Other \_\_\_\_\_

Recipient number of biliary anastomoses \_\_\_\_\_ #

#### Type of recipient biliary anastomosis

- End to end  Hepaticojejunostomy  T tube insertion
- Other \_\_\_\_\_

Recipient operation duration \_\_\_\_\_ minutes

*Time from skin incision to skin closure in minutes*

Intraoperative recipient adverse events  None

- Grade 1  Grade 2  Grade 3  Grade 4  Grade 5
- Other \_\_\_\_\_

*For more information visit [ldltregistry.org/IAE](https://ldltregistry.org/IAE)*

Surgical portal flow modulation  Yes  No

Method of surgical portal flow modulation

- Splenic artery ligation  Splenectomy
- Hemi-portocaval Shunt  Other \_\_\_\_\_

Pharmacological portal flow modulation  Yes  No

Agent used for pharmacological portal flow modulation

- Octreotide  Terlipressin  Somatostatin
- Vasopressin  Other \_\_\_\_\_

Intraoperative veno-venous bypass  Yes  No

Intraoperative renal replacement therapy  Yes  No

Recipient surgical drain  None  Yes

Number and types of drains \_\_\_\_\_

Recipient on-table extubation  Yes  No

Recipient ERAS pathway  Yes  No

*Does your institution have an established ERAS pathway for liver transplant recipients including peri- and postoperative interventions? If yes, did this recipient enter the ERAS pathway?*

Recipient transfusion practice based on viscoelastic testing (e.g. TEG or ROTEM)  Yes  No

*TEG: Thromboelastogram | ROTEM: Rotation thromboelastometry*

### Recipient Postoperative Characteristics until Hospital Discharge

Recipient postoperative location  Ward / floor

- Intensive care unit (ICU)  Monitored unit (IMC/HDU)

*IMC: Intermediate care unit | HDU: High dependency unit*

Recipient length of intensive care unit (ICU) stay \_\_\_\_\_ days

Duration of recipient postoperative ventilation \_\_\_\_\_ hours

*Time from skin closure to extubation*

Recipient length of monitored unit (IMC/HDU) stay \_\_\_\_\_ days

Recipient postoperative inotropes  Yes  No

Recipient need for post-transplant renal replacement therapy (RRT)  Yes  No

Recipient postoperative peak AST (up to day 7 post-transplant) \_\_\_\_\_ IU/L

*AST: Aspartate aminotransferase*

Recipient postoperative peak ALT (up to day 7 post-transplant) \_\_\_\_\_ IU/L

*ALT: Alanine aminotransferase*

Recipient bilirubin at day 7 post-transplant \_\_\_\_\_ μmol/L

*Typical normal ranges 3-25 (μmol/l). Use our conversion calculator from mg/dL to μmol/l: <https://ldltregistry.org/conversions>*

Recipient bilirubin at day 14 post-transplant \_\_\_\_\_ μmol/L

*if available. Typical normal ranges 3-25 (μmol/l). Use our conversion calculator from mg/dL to μmol/l: <https://ldltregistry.org/conversions>*

Recipient INR at day 7 post-transplant \_\_\_\_\_ ratio

*INR: International normalized ratio*

Recipient peak Lactate at day 1 post-transplant \_\_\_\_\_ mmol/L

*Day 1 post-transplant, NOT intraoperative*

Blood transfusion with packed red cells \_\_\_\_\_ units

*Total number of blood units transfused from transplant until hospital discharge*

Recipient complications types and grades according to the Clavien-Dindo Classification until hospital discharge\*

Complication type	No	1	2	3a	3b	4a	4b	5
Acute rejection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ascites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bile leak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biliary obstruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biliary stricture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biloma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bowel obstruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiac	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neurologic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hepatic artery stenosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hepatic artery thrombosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neurologic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulmonary embolism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Portal vein thrombosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postoperative bleeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Primary non function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Renal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respiratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surgical site Infection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other infection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Venous thromboembolism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*For more information regarding the Clavien-Dindo classification of postoperative complications follow: <https://ldltregistry.org/complications>*

Describe below other types and grades of recipient postoperative complications \_\_\_\_\_

*Ensure to specify other types as well as their corresponding grades of postoperative complications according to the Clavien-Dindo Classification. See <https://ldltregistry.org/complications> for more info.*



### Recipient Postoperative Characteristics until Hospital Discharge continued...

If grade 3a/3b recipient complication, type of intervention

- Radiological  Endoscopic  Surgical
- Other \_\_\_\_\_

Ascites 1L/day or more of the recipient at day 14 post-transplant  Yes  No

Recipient length of hospital stay until discharge \_\_\_\_ d

Use our date duration calculator at: <https://ldltregistry.org/conversions>

### Recipient Postoperative Outcomes from Discharge up until 1 Year of follow up

Please report all complications from hospital discharge up to 12 months postoperatively excluding those already stated above (i.e. those during hospitalization). This section may be completed in retrospect when the recipient reached 1 year of follow up. You will be able to search for this submission and edit it in the future.

Recipient complications from hospital discharge until 12 months of follow up  12 month follow up not complete

- Yes  No  Unknown / no follow up

Please list the types and grades of complications as well as the postoperative day they were diagnosed

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E.g., 1 Type of complication | Grade | Postoperative day

Recipient hospital readmission until 12 months postoperatively  12 month follow up not complete yet

- Yes  No  Unknown / lost to follow up

Specify the reason and postoperative day of hospital readmission \_\_\_\_\_

Recipient status at 1 year post-transplant

- 12 month follow up not completed yet
- Alive at 1 year post-transplant
- Dead within 1 year post-transplant
- Unknown / lost to follow up

The recipient status indicates whether the patient was last seen alive or dead at the hospital, followed up at the outpatient clinic, family doctor, or confirmed after being contacted by phone up to 12 months post-transplant. Below you are requested to indicate the number of days from transplantation until last follow up or death.

Recipient days from transplantation to death \_\_\_\_\_ days

Use our date duration calculator at: <https://ldltregistry.org/conversions>

Recipient graft status at 1 year post-transplant

- 12 month follow up not completed yet
- Graft functioning at 1 year post-transplant
- Graft failure within 1 year post-transplant
- Unknown / lost to follow up

Graft failure indicates retransplantation or patient death.

Recipient days from transplantation to graft failure \_\_\_\_\_ days

Use our date duration calculator at: <https://ldltregistry.org/conversions>

Recipient cancer free survival for cancer only

- No cancer diagnosis
- 12 month follow up not completed yet
- Cancer free at 1 year post-transplant
- Cancer recurrence within 1 year post-transplant
- Unknown / lost to follow up

Recipient days from transplantation to cancer recurrence \_\_\_\_\_ days

Use our date duration calculator at: <https://ldltregistry.org/conversions>

### Recipient Postoperative Outcomes from Discharge up until 1 Year of follow up

Please report all complications from hospital discharge up to 12 months postoperatively excluding those already stated above (i.e. those during hospitalization). This section may be completed in retrospect when the recipient reached 1 year of follow up. You will be able to search for this submission and edit it in the future.

#### Recipient submission data completion

- Recipient data complete until hospital discharge
- Recipient data complete until 1 year of follow up

Comments regarding the recipient case submission (optional) \_\_\_\_\_

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You have now reached the end of the Donor and the Recipient Case Report Form (CRF). You may also transfer the data to our electronic CRF (eCRF), first login and then submit to <https://ldltregistry.org/eCRF>. You may search and edit your submissions at any time by following the "My submitted cases" link.

#### Useful information

Please login to [LDLTregistry.org](https://ldltregistry.org) to use our **online tools** for generating random ID numbers, converting units, calculating smoking pack years, calculating the duration between two time points, as well as for calculating the Remnant liver volume data available at: <https://ldltregistry.org/conversions>

Several classifications and definitions are available at the right-side menu titled "Terminology". Please login to <https://ldltregistry.org/complications> and ensure that you are familiar with the Clavien-Dindo Classification of postoperative surgical complications and the intra-operative adverse events classification.

We have created a Universal Visual Analogue Scale (VAS) conversion figure with a scale 0-10 to ensure uniform reporting available at: <https://ldltregistry.org/VAS>

You may access your online submitted cases and edit them at any time. For example, 12 month follow up data of the donor and recipient can be submitted in retrospect when they reach 12 months of follow up. Please click on the "My submitted cases (edit)" edit link under the "Case Submission" right-side menu. The table with your submitted cases can be sorted by clicking on any parameter title. You may use the search function (control F for PC or command F for Mac) to identify a case using the Submission, Donor or Recipient ID. The Donor and Recipient Discharge and 1 year parameter titles can also be sorted to identify and update cases with incomplete data at discharge or 1 year of follow up.

Contact us: <https://ldltregistry.org/contact>

URL: <https://LDLTRegistry.org>