



# Electronic Case Report Form (eCRF)

Submitted by Dimitri Raptis on Sun, 01/29/2023 - 23:52

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## Patient Characteristics

Please enter below a unique case identification (Case ID) number as an identifier. Do not use the hospital number or other patient identifiers.

Please keep a separate list of anonymized case numbers linking to the patient hospital number somewhere safe at your institution. This will help you identify patients in the CRF for further editing if needed.

[Click here to access a random number generator if you wish \(Min: 100000, Max: 1000000\)](#)

Case ID\*

Age\*  years

This is the age of the patient at the time of the primary operation.

**Gender\***

Male  Female

Height\*  cm

[Click here to use our unit conversion calculator.](#)

Weight\*  kg

[Click here to use our unit conversion calculator.](#)

**Ethnicity**

Caucasian  Latino/Hispanic  Middle Eastern  African  Caribbean  South Asian  
 East Asian  Mixed  Other...

Enter other...

## Disease Characteristics

**Comorbidities\***

- None
- Myocardial infarction
- Congestive heart failure
- Peripheral vascular disease
- Cardiovascular accident or Transient Ischemic Attack
- Dementia
- COPD

## Member Menu

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- Connective tissue disease
- Peptic ulcer disease
- Liver disease - mild
- Liver disease - moderate or severe
- Diabetes mellitus
- Hemiplegia
- Chronic Kidney Disease - moderate to severe
- Solid tumor - localized
- Solid tumor - metastatic
- Leukemia
- Lymphoma
- COVID-19 - previous
- COVID-19 - within 6 weeks prior to surgery
- COVID-19 - perioperatively
- Other...

This classification is structured as such to calculate the Charlson Comorbidity Index (CCI). [Click here for more information.](#)

#### 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 that is a constant threat to life
- ASA 5 - A moribund patient who is not expected to survive without the operation

#### Indication for ex situ liver surgery\*

- Adenomatosis of the liver
- Cholangiocarcinoma - hilar
- Cholangiocarcinoma - intrahepatic
- Colorectal liver metastases
- Pheochromocytomas - extra adrenal
- Hemangioma - giant cavernous
- Hepatoblastoma
- Hepatocellular carcinoma
- Hydatid liver disease
- Leiomyosarcomas of the vena cava
- Non-colorectal liver metastases
- Renal carcinomas
- Trauma of the liver with vascular injury
- Other...

#### Previous liver surgery\*

- Yes  No

#### Liver segments previously resected

- None  S1  S2  S3  S4  S6  S7  S8

**Preoperative chemotherapy\*** Yes  NoChemotherapy agents used & number of cycles <sup>?</sup>*Please list the chemotherapy agents used and the number of cycles for each, separated by a comma "".***Preoperative radiotherapy\*** Yes  NoTotal amount of radiation  cGy<sup>?</sup> Time from last radiotherapy to surgery  days[Click here to use our date duration calculator.](#)**Portal vein embolization (PVE) prior to surgery\*** Yes  No

Specify which portal veins branches were embolized

**Hepatic vein embolization (HVE) prior to surgery** Yes  No

Specify which hepatic veins branches were embolized

Total liver volume (if available)  ccFuture liver remnant (FLR) volume (if available)  ccFuture liver remnant (FLR) in % (if available)  %Remnant liver volume to body weight ratio (if available)  %**Preoperative laboratory blood values**

Please enter the most recent blood values prior to surgery.

Platelets\*  n°/μLCreatinine\* <sup>?</sup>  μmol/L[Click here to use our unit conversion calculator.](#)Albumin\*  g/LSodium\*  mmol/LAST\*  U/LALT\*  U/LBilirubin\* <sup>?</sup>  μmol/L[Click here to use our unit conversion calculator.](#)

INR\*  ratio

ICG R15 (if available)  %

### Operation Characteristics

Procedure performed ?

*Please enter the procedure performed as it appears in the operation letter / documentation.*

#### Complexity of ex situ liver surgery\*

- None
- IVC involvement
- Hepatic vein confluence involvement
- Hilar involvement
- Biliary confluence resection
- Small remnant liver volume
- Extrahepatic visceral resection
- Other...

#### Hepatic veins involved

- Right  Middle  Left

#### Hilar structures involved

- Portal vein  Hepatic artery  Hepatic duct

Extrahepatic organs resected ?

#### Venovenous bypass\*

- Yes  No

#### Type of cold preservation solution of the liver used\*

- University of Wisconsin solution (UW)
- Histidine-tryptophan-ketoglutarate solution (HTK)
- Celsior solution
- Other...

Amount of preservation solution used  ml

#### Liver segments resected\*

- None  S1  S2  S3  S4  S6  S7  S8

Cold ischemia time (CIT)  min

Operation duration\* ?  min

*Time from skin incision to skin closure*

**IVC reconstruction**

- None  Primary repair  Patch  Graft  Other...

Enter other...

**Graft used for IVC reconstruction**

- Autologous vein  Cadaveric vein  Synthetic material  Other...

Enter other...

Type of synthetic graft (IVC)

**Hepatic vein anastomosis**

- Reimplantation  Graft prosthesis  Other...

Enter other...

**Graft used for hepatic vein reconstruction**

- Autologous vein  Cadaveric vein  Synthetic material  Other...

Enter other...

Type of synthetic graft (hepatic veins)

**Portal vein reconstruction**

- None  Primary repair  Patch  Graft  Other...

Enter other...

**Graft used for portal vein reconstruction**

- Autologous vein  Cadaveric vein  Synthetic material  Other...

Enter other...

Type of synthetic graft (portal vein)

**Hepatic artery reconstruction**

- None  Aortohepatic conduit  Other...

Enter other...

Estimated blood loss  ml

Time from skin incision to skin closure

**Blood products used\***

- Yes  No

Number of Packed Red Cell units  units

*Time from skin incision to skin closure*

Number of platelet pools  pools

*Time from skin incision to skin closure*

Number of fresh frozen plasma (FFP) units  units

*Time from skin incision to skin closure*

## Postoperative Characteristics

### Postoperative Laboratory Values

Day 1 platelets\*  n<sup>o</sup>/μL

*Day 1: 1st postoperative day*

Day 3 platelets\*  n<sup>o</sup>/μL

*Day 3: 3rd postoperative day*

Day 5 platelets\*  n<sup>o</sup>/μL

*Day 5: 5th postoperative day*

Day 1 Creatinine\*  μmol/L

[Click here to use our unit conversion calculator.](#)

Day 3 Creatinine\*  μmol/L

[Click here to use our unit conversion calculator.](#)

Day 5 Creatinine\*  μmol/L

[Click here to use our unit conversion calculator.](#)

Day 1 AST\*  U/L

Day 3 AST\*  U/L

Day 5 AST\*  U/L

Day 1 ALT\*  U/L

Day 3 ALT\*  U/L

Day 5 ALT\*  U/L

Day 1 bilirubin\*  μmol/L

[Click here to use our unit conversion calculator.](#)

Day 3 bilirubin\*  μmol/L

[Click here to use our unit conversion calculator.](#)

Day 5 bilirubin\*  μmol/L

[Click here to use our unit conversion calculator.](#)

Day 1 INR\*  ratio

Day 3 INR\*  ratio

Day 5 INR\*  ratio

### Histopathology Findings

Total number of lesions\*  number

Maximum diameter of largest lesions\*  mm

#### Resection margins\* ?

No cancer  R0  R1  R2

*R0 – no residual tumour;*

*R1 – microscopic residual tumour <1 mm from the surgical margin;*

*R2 – macroscopic residual tumour;*

#### Vascular invasion\*

No cancer  Yes  No

Site of vascular invasion on histopathology

#### Non-tumoral liver parenchyma

Healthy  Steatosis  Fibrosis  Other...

### Postoperative Outcomes until 90 Days Postoperatively

Complications types & grades according to the Clavien–Dindo Classification until 90 days postop\* ?

	NO	1	2	3A	3B	4A	4B	5
Abdominal wall dehiscence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ascites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bile leak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biliary stricture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biloma	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bowel obstruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cardiac	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deep vein thrombosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gastrointestinal (other)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intra-abdominal fluid collection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Liver failure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neurologic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pleural effusion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Portal vein thrombosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Portal vein stenosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Postoperative bleeding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pulmonary embolism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respiratory (other)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Small for size syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surgical site infection (SSI)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Urinary tract infection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other infection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vascular	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other complication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*This field is mandatory. If the donor did not encounter any complications from operation until discharge, please allow "No" for all types and grades of complications listed above. In case of other types of complications, please indicate below the types. Note: Gastrointestinal complications include: ileus, diarrhea. [Click here for more information regarding the Clavien-Dindo classification of postoperative complications.](#)*

Specify the types and grades of other complications

1. Type, Clavien-Dindo grade, treatment etc.

**Salvage liver transplantation within 90 days postop\***

Yes  No

Length of intensive care unit stay\*  days

Length of hospital stay\*  days

**Hospital readmission within 90 days postop\***

Yes  No

**Long-term Outcomes**

**Adjuvant therapy\***

None  Chemotherapy  Radiotherapy  Other...

Enter other...

**Patient status\* ?**

Alive  Dead from cancer  Dead from another cause

*The patient 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. Below you are requested to indicate the number of days from transplantation until last follow up or death. [Click here to use our date duration calculator if you wish.](#)*

Days from surgery to last follow up or death\*  days

*i.e. days from surgery to death or last follow up recording. This value (number of days) may indicate the time from surgery to the last follow up recording for alive patients or the time from surgery to death for those that died.*

**Disease free survival (if cancer) ?**

No cancer diagnosis  No recurrence  Recurrence

*This section refers to patients with cancer diagnosis only. The disease free survival for cancer should be calculated from the date of surgery to*



the date of the diagnosis of cancer recurrence. If there was no evidence of cancer recurrence at the last follow up, please indicate the days from transplantation until last follow up. In case of death without any previous evidence of cancer recurrence, please indicate the days from transplantation until death. [Click here to use our date duration calculator if you wish.](#)

Days from surgery to last follow up or cancer recurrence \*

days  
i.e. days from surgery to death or last follow up recording. This value (number of days) may indicate the time form surgery to the last follow up recording for alive patients or the time from surgery to death for those that died.

Cause of death (other than cancer)

**Graft survival (if salvage liver transplant performed) ?**

No liver transplant  Graft functioning  Graft failure

Graft failure indicates retransplantation or patient death. This section refers to patients that received salvage liver transplant following liver failure. The graft survival should be calculated from the date of liver transplant to the date of last follow up, retransplantation, or death. If there was no evidence of graft failure at the last follow up, please indicate the days from transplantation until last follow up. [Click here to use our date duration calculator if you wish.](#)

Days from transplantation to last follow up or graft failure ?

days  
This should be calculated from the date of transplantation to the date of retransplantation or death. If the graft was functioning at the last follow up, please indicate the days from transplantation until last follow up.

**Data completion ?**

	YES	NO
Data until 90 day postop complete	<input type="radio"/>	<input checked="" type="radio"/>
Long-term data (follow up, recurrence, survival) complete	<input type="radio"/>	<input checked="" type="radio"/>

You may submit this case and complete it at a later stage. Please specify data completion below. Cases with incomplete data submission will be excluded from the analysis.

Comments (optional)

By clicking on the "Save Draft" button, you may return to this form later and it will restore the current values. You will not be able to submit another case until the current form is submitted.

By clicking on the "Submit" button, your case will be permanently saved and you will be able to fill out and submit the next case. If you would like to update or change existing cases, please click on the "My submitted cases" link available at the right menu bar.