DIST Standard Operation Procedures
Work instruction DIST

SOP: work instruction	Version No.: 2.0	Valid as of 24-03-2023

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1. PURPOSE

This standard operating procedure (SOP) contains an overview of all the steps required to include a patient in the Dutch ICH Surgery Trial (DIST), and the course of the further study process.

2. SCOPE

This SOP applies to the local principal investigator (PI) and his/her delegates of investigator-initiated research subject to WMO, who are involved in screening and including patients, performing study actions, filling in information on the Case Report Forms (CRFs) and reporting serious adverse events (SAEs) within the Dutch ICH Surgery Trial (DIST).

3. DEFINITIONS AND ABBREVIATIONS

ADL	Activities of Daily Living
AVM	ArterioVenous Malformation
CONTRAST	Collaboration for New Treatments of Acute Stroke
CRF	Case Report Form
CTA	Computed Tomography Angiography
CTP	CT Perfusion
CVST	Cerebral Venous Sinus Thrombosis
DAVF	Dural ArterioVenous Fistula
DICOM	Digital Imaging and Communications in Medicine
DIST	Dutch ICH Surgery Trial
eCRF	Electronic Case Report Form
EDC	Electronic Data Capture
SPD	Electronic Patient Record
EQ-5D-5L	EuroQol five-Dimension five-Level
GCP	Good Clinical Practice
ICU	Intensive Care Unit
ICF	Informed Consent Form
ICH	Intracerebral hemorrhage
ICH-GS	ICH Grading Scale
iMTA	Institute for Medical Technology Assessment
INR	International Normalized Ratio
ISF	Investigator Site File; at participating center multicenter research
mRS	Modified Rankin Scale
NCCT	Non-Contrast CT
NIHSS	National Institutes of Health Stroke Scale
PACS	Picture Archiving and Communication System
PI	Principal Investigator
PIF	Participant Information Form
PROBE	Prospective Randomized Open, Blinded End-point
(S)AEs	(Serious) Adverse Events
SOP	Standard Operating Procedure
SS-QoL	Stroke-Specific Quality of Life
WMO	Medical Research Involving Human Subjects Act (Dutch: *Wet Medisch-wetenschappelijk Onderzoek met mensen*)
2FA	Two Factor Authentication

4. RESPONSIBILITIES

It is the responsibility of the local PI that all study procedures are performed within the DIST as outlined in the study protocol (and any amendments).

In practice, the research staff (e.g. the co-investigator or research nurse/study coordinator) will usually carry out the research activities. In this SOP, these employees are referred to as the delegates.

It is the responsibility of the local PI to ensure that all delegates involved in carrying out study procedures are trained in this SOP.

Delegates must be listed on the *Delegation Log of Authority*. It is expected that all those involved are demonstrably aware of the parts of the legislation and regulations (WMO/GCP), *Declaration of Helsinki* and the research protocol relevant to their research activities.

5. STUDY CHARACTERISTICS

Title: Dutch ICH Surgery Trial (DIST); minimally invasive endoscopy-guided surgery for spontaneous supratentorial intracerebral hemorrhage

Study design: multicenter, prospective, randomized, open, blinded endpoint (PROBE) trial.

Purpose: To investigate whether minimally invasive, endoscopy-guided surgery performed within 8 hours of symptom onset in addition to standard medical treatment for the treatment of spontaneous supratentorial ICH improves functional outcome, compared to standard medical treatment alone.

Study population: 600 patients aged 18 years or older with spontaneous supratentorial ICH with a hematoma volume of at least 10 mL and an NIHSS of 2 or higher. Patients with secondary causes (e.g. an intracranial aneurysm, AVM, DAVF or CVST) of the ICH will be excluded based on the CTA at admission.

Intervention: Patients will be randomized (1:1) to minimally invasive, endoscopy-guided surgery performed within 8 hours of symptom onset in addition to standard medical treatment, or standard medical treatment alone.

Duration: 4 years, consisting of 3 years of inclusion with a follow-up duration of 1 year.

For a complete overview of the study design and the study procedures of the DIST, we refer to the **study protocol**, which can be found on the DIST website: trial protocol and documents.

6. PROCEDURES

6.1. Check eligibility for possible participation

To be eligible to participate in the DIST, a patient must meet all of the inclusion criteria listed below. A potential participant who meets one of the exclusion criteria will be excluded from participation.

Inclusion Criteria:

- Age ≥ 18 years;
- NIHSS ≥ 2;
- Supratentorial ICH confirmed by brain CT, and with a CTA at the time of presentation excluding macrovascular (e.g. an aneurysm, AVM, DAVF or CVST) or other causative lesions (e.g. tumor or cavernoma);
- Minimum hematoma volume of 10 mL (calculated by the ABC/2 formula);
- Intervention can be started within 8 hours of the onset of symptoms.

Exclusion criteria:

- Significant dependence in ADL before the ICH, defined as a score on the mRS ≥3;
- ICH-GS score ≥11 (see table 1);
- ICH due to hemorrhagic transformation of ischemic stroke;
- Untreated coagulation abnormalities, including:
    a. INR > 1.3 (point-of-care measurement allowed; patients taking a vitamin K antagonist may be included after correction of the INR);
    b. treatment with therapeutic heparin;
    c. treatment with factor Xa inhibitors (apixaban, rivaroxaban, edoxaban);

  Patients taking dabigatran (factor II inhibitor) can be included after adequate treatment with idarucizumab;
- Moribund (e.g. bilateral dilated pupils unresponsive to light), or rapidly progressive deteriorating clinical course with imminent death;
- Pregnancy.

Table 1: ICH-GS score

Attribute	Points
Age, years	
<45	1
45 – 64	2
≥65	3
Glasgow Come Scale Score	
13 – 15	1
9 – 12	2
3 – 8	3
Supratentorial location	1
ICH volume supratentorial	
<40 ml	1
40-70 ml	2
>70 ml	3
Intraventricular blood	
No	1
Yes	2
ICH-GS Score	5-12

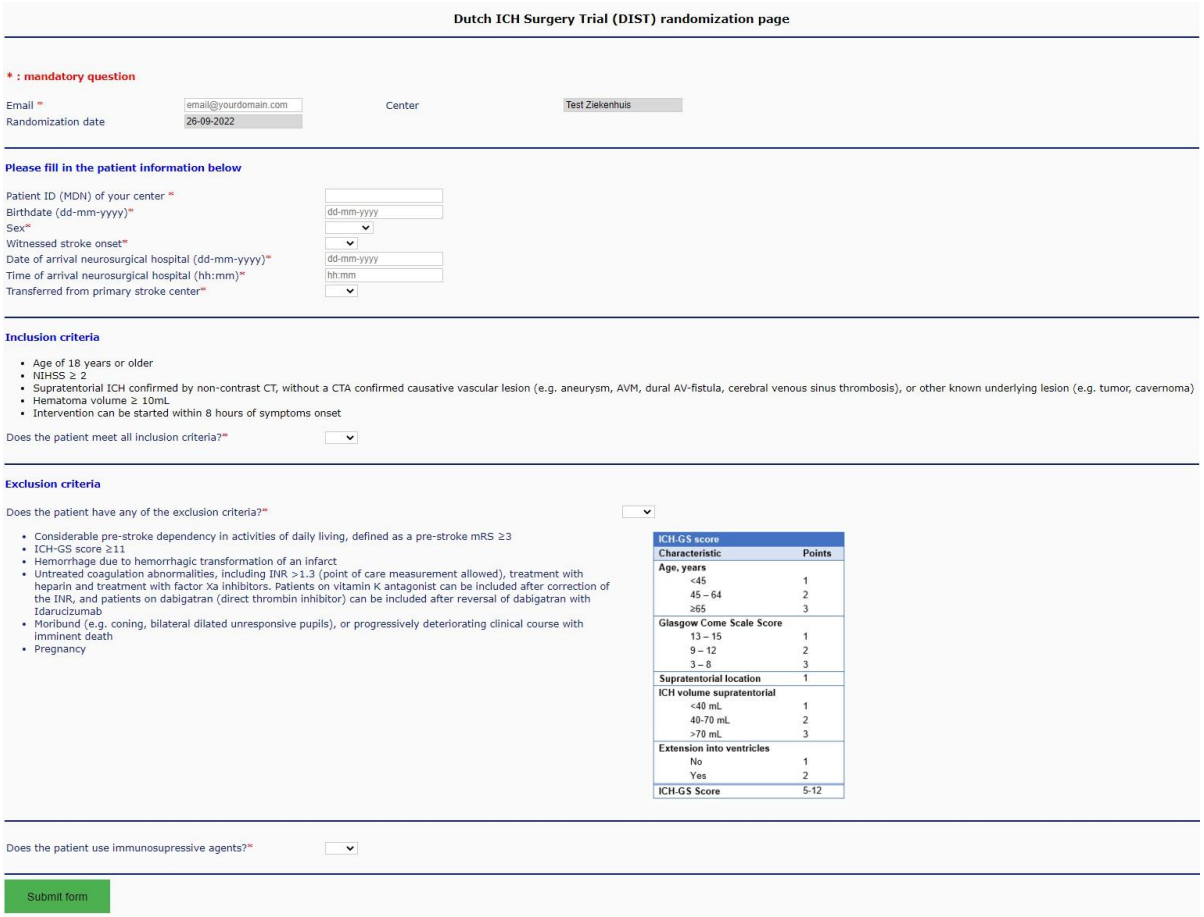
Screening Log

Maintain a list of all patients with ICH screened for the study and document in case of exclusion why the patient could not participate. The screening log is important to determine why patients cannot be included during the study and to be able to estimate generalizability of the study results.

6.2. Randomization

If a patient meets all inclusion criteria and has no exclusion criteria for participation in the DIST, a patient can be included and randomized:

1. Go to the DIST website: randomize.
2. Click on "Click **HERE** to randomize a new patient".
3. Login with your center-specific login details (stated on the pocket card).
4. Fill in the following screen with your email address and the patient information, and check off the inclusion and exclusion criteria; when all items have been filled in you can click the green button to submit the form and randomize the patient:



Dutch ICH Surgery Trial (DIST) randomization page

*** : mandatory question**

Email * email@yourdomain.com Center Test Ziekenhuis
Randomization date 26-09-2022

Please fill in the patient information below

Patient ID (MDN) of your center *
Birthdate (dd-mm-yyyy)* dd-mm-yyyy
Sex*
Witnessed stroke onset*
Date of arrival neurosurgical hospital (dd-mm-yyyy)* dd-mm-yyyy
Time of arrival neurosurgical hospital (hh:mm)* hh:mm
Transferred from primary stroke center*

Inclusion criteria

- Age of 18 years or older
- NIHSS ≥ 2
- Supratentorial ICH confirmed by non-contrast CT, without a CTA confirmed causative vascular lesion (e.g. aneurysm, AVM, dural AV-fistula, cerebral venous sinus thrombosis), or other known underlying lesion (e.g. tumor, cavernoma)
- Hematoma volume ≥ 10mL
- Intervention can be started within 8 hours of symptoms onset

Does the patient meet all inclusion criteria?*

Exclusion criteria

Does the patient have any of the exclusion criteria?*

- Considerable pre-stroke dependency in activities of daily living, defined as a pre-stroke mRS ≥3
- ICH-GS score ≥11
- Hemorrhage due to hemorrhagic transformation of an infarct
- Untreated coagulation abnormalities, including INR >1.3 (point of care measurement allowed), treatment with heparin and treatment with factor Xa inhibitors. Patients on vitamin K antagonist can be included after correction of the INR, and patients on dabigatran (direct thrombin inhibitor) can be included after reversal of dabigatran with Idarucizumab
- Moribund (e.g. coning, bilateral dilated unresponsive pupils), or progressively deteriorating clinical course with imminent death
- Pregnancy

ICH-GS score

Characteristic	Points
Age, years	
<45	1
45 – 64	2
≥65	3
Glasgow Come Scale Score	
13 – 15	1
9 – 12	2
3 – 8	3
Supratentorial location	1
ICH volume supratentorial	
<40 mL	1
40-70 mL	2
>70 mL	3
Extension into ventricles	
No	1
Yes	2
ICH-GS Score	5-12

Does the patient use immunosupressive agents?*

Submit form

Specific explanation of certain parts:

- Under "Email": enter the email address of the person who includes the patient.
- At "Patient ID (MDN) of your center": enter the patient/medical file number of the patient from the EHR.
- For "Witnessed stroke onset": in case of witnessed stroke onset (*yes*), enter the date and time of *symptom onset* . In case of unwitnessed stroke onset (*no*), enter date and time of *last seen well* and *symptoms noticed* .
- For "Transferred from primary stroke center": in case of transfer from another center (*yes*), enter the date and time of arrival at the other (first) hospital and the name of the hospital in question.

5. If all information is complete and correct, click on 'Submit form'.

   A screen will then appear with a:
   - DIST number *example:* Study ID: *20001*
   - Center specific number *example*: Center ID: *EMC-001*
   - Randomization results *example:* Study group: *1. Surgery group (minimally invasive endoscopy-guided surgery in addition to standard medical treatment)*

   You will receive an inclusion confirmation at the email address provided. A copy of the inclusion with encrypted inclusion data is sent to the DIST mailbox.

6. Record both numbers (study and center ID) from the inclusion confirmation and the outcome of the randomization in the electronic medical file and treat the patient according to the assigned study arm.

Subject identification log

Record of the included participants' data in the subject identification log, where the personal data is recorded along with the study numbers, so that it can be used as a code table. Only anonimous data should be entered into the eCRF.

6.3. Information provision and requesting deferred consent

DIST uses deferred consent to acquire approval for future use of data for the trial. This means that after inclusion and randomization (in patients in the control group) or after surgery (in patients in the surgery group), consent will be requested from the participant or his/her legal representative.

For more information about the information interview and how to request deferred informed consent, please refer to the documents '**SOP Information provision and deferred informed consent in the subacute phase** ' and '**SOP Information provision in the acute phase'**.

For the DIST, all patient information forms and informed consent forms per center can be found on the DIST website: trial protocol and documents. Paper CRFs are also available here.

Provide a PIF and ICF in duplicate and make sure it is dated and signed correctly by the participant or his/her legal representative, and signed by the person who acquired deferred consent. One copy should be handed the participant (or legal representative), and one copy should be documented in the ISF which should be kept at the research site at all times. A copy of the signed consent for should be uploaded to the EHR.

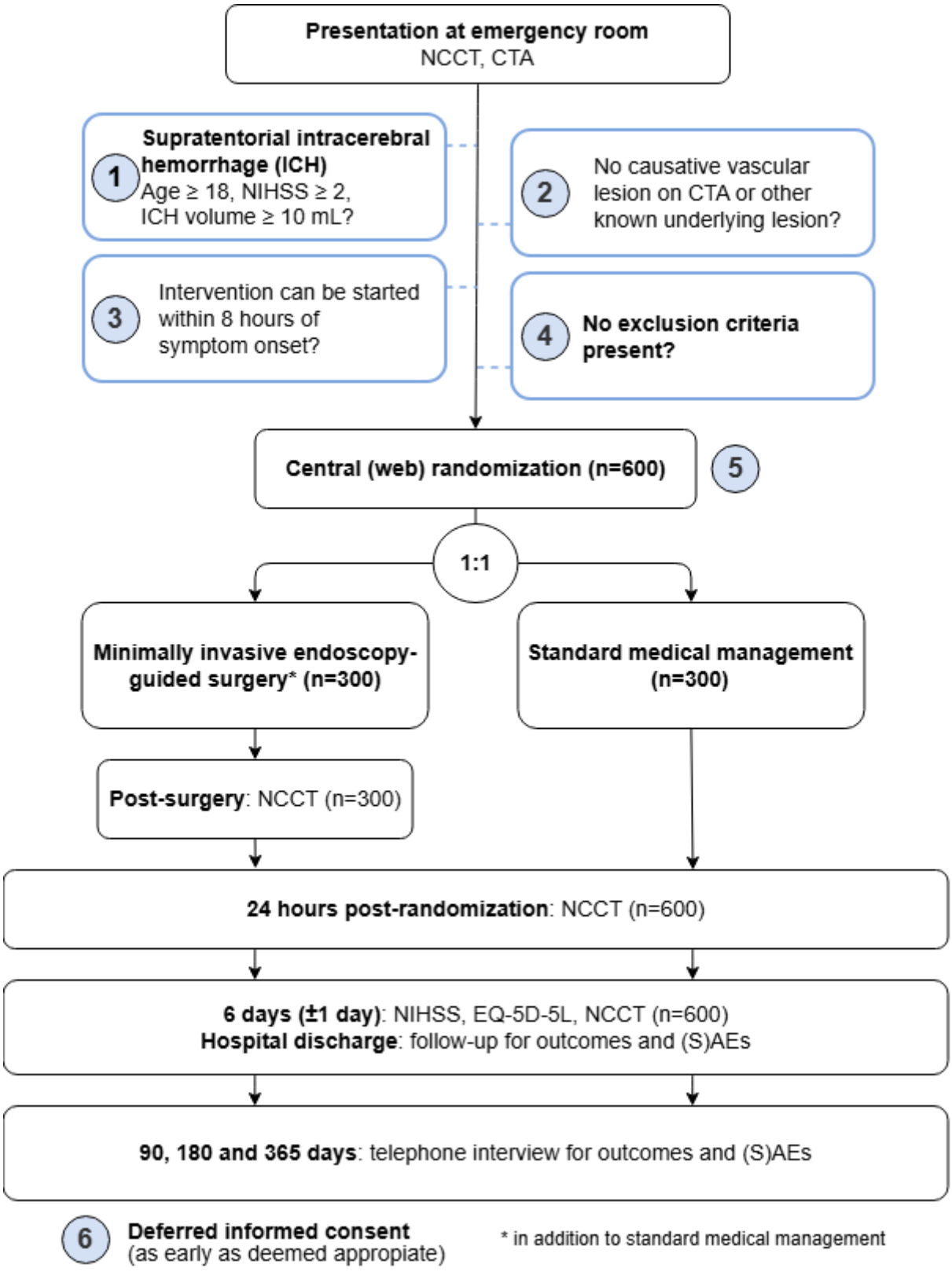
6.4. Treatment policy and restrictions upon admission

ICH is a medical emergency in which most patients benefit from an early, active treatment policy. Several studies have shown that early treatment limitations in ICH, such as a no-resuscitation policy, *withdrawal of care* or initiation of palliative care, independently predict mortality after correction for clinical prognostic factors.

It is therefore important that an active treatment policy is used for all participants included in the DIST upon admission in both treatment groups (to prevent a possible *treatment bias*). In other words: at least an intubate and intensive-care admission policy for short-term intercurrent problems (e.g. intubation to bridge an operation or for expected short ventilation period in case of pneumonia; or ICU admission for intravenous blood pressure treatment or rhythm observation), and no early initiation of palliative care. Any pre-agreed 'do not resuscitate policy' or 'do not intubate policy in the case of expected long-term ventilation trajectory' are hereby permitted.

6.5. Study procedures

The **current checklist** of all study procedures is available on the DIST website: trial protocol and documents



CTA: Computed tomography angiogram; EQ-5D-5L: EuroQol 5-dimensions 5-level; ICH: intracerebral hemorrhage; NCCT: Non-contrast computed tomography; NIHSS: National Institutes of Health Stroke Scale; (S)AEs: (Serious) Adverse Events

6.5.1. NIHSS score

At baseline and on day 6 (±1 day), the NIHSS will be recorded. For an explanation of the NIHSS scoring system in comatose or confused patients, see Appendix 2.

Some practical advises:

- Item 11 (extinction/inattention): may only be scored if it can also be tested. If this item cannot be tested properly (e.g. in case of reduced consciousness, loss of sensitivity and/or hemianopia), then always score as 0.
- In comatose patients, specific agreements apply on how certain items are scored. For example, item 9 (aphasia) is scored as 3 and item 10 (dysarthria) as 2. See Appendix 2 for an overview of all instructions.
- Please note: 'untestable' at item 5/6 (motor arm/leg) may only be used if someone has an amputation, for example, and at item 10 (dysarthria) only if there is a physical barrier such as a tube in situ.

6.5.2. EQ-5D-5L

On day 6 (±1 day), the EQ-5D-5L will be administered, a questionnaire about how patients rate their own health. The questionnaires can be found in the ISF (folder F1). There is a separate questionnaire for patients and third parties. If the patient is legally competent, the questionnaire for patients is reviewed. If the patient is not legally competent, the questionnaire for third parties will be reviewed. It is important that the person who answers the questions gives the answers that he/she thinks the patient would have given. The answers are recorded in the eCRF.

6.5.3. Follow-up imaging

At baseline, all participants enrolled in the DIST will have a non-contrast brain CT and CTA.

In the participants allocated to the surgery group, if deemed necessary by the operating neurosurgeon, an additional neuronavigation CT scan will be performed prior to surgery. A non-contrast brain CT scan immediately postoperatively or intraoperatively (if possible at hybrid OR) to assess the degree of hematoma evacuation and any complications is required at all times.

During the clinical follow-up, a non-contrast brain CT scan will be performed in all participants (in the surgery and control group) at 24 hours (± 6 hours) and day 6 (± 1 day). Request these follow-up CT scans via the EHR directly after randomization so that they can be scheduled accordingly.

6.6. Data administration

6.6.1. Filling in paper CRF

In the emergency room, after surgery and on the ward, the CRFs can be completed on paper. In some centres, it is decided to use the EHR as a source document. This is also allowed, provided that all requested data entered in the eCRF can also be found in the EHR.

Put the study numbers (DIST number and center-specific number) on the CRF forms.

Blank CRF forms can be found on the DIST website: trial protocol and documents.

1. Make sure that the baseline CRF is completed.
2. Make sure that the 'Surgery CRF' is completed by the neurosurgeon as soon as possible after surgery has been completed.
3. Report (S)AEs via dutchichstudie.neuro@radboudumc.nl and/or on the DIST phone: 06-11 19 69 11 and fill in an SAE CRF (also in Castor EDC).
4. After 24 hours, after day 6 ± 1 day and at discharge, the Clinical Follow up CRF will be completed.

6.6.2. Data administration in eCRF in Castor EDC

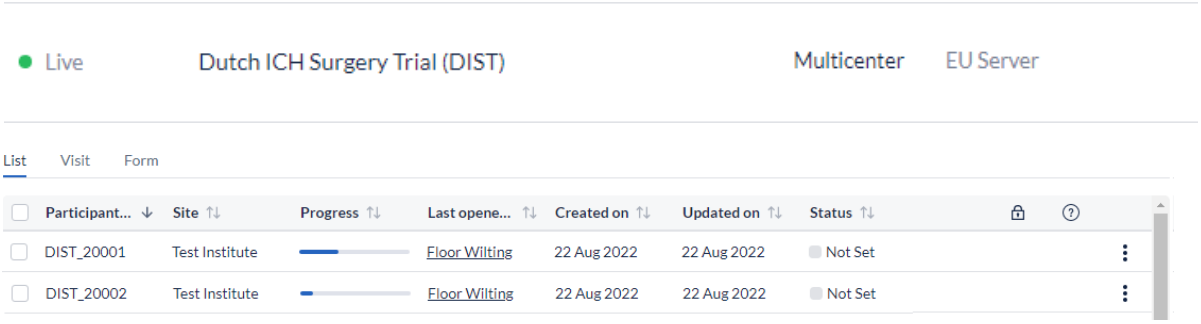
For all DIST participants, a participant record in Castor EDC will be created by the sponsor (Radboudumc) within one working day after inclusion. Data entered online in the randomization module (such as age, time of onset of symptoms, treatment arm assignment, etc.) will be recorded in the eCRF in by the sponsor.

To fill in the informed consent, baseline CRF, surgery CRF, clinical follow-up CRF and SAE forms, go to Castor EDC.

1. Go to Castor EDC production environment: https://www.castoredc.com/
2. Log in with your personal Castor EDC account with two factor authentication:
    a. If you do not yet have access to the DIST Castor EDC production environment with your email address, you can request this via our mailbox: dutchichstudie.neuro@radboudumc.nl
    b. If you don't have a Castor EDC account or 2FA enabled yet, see the following link for more information:

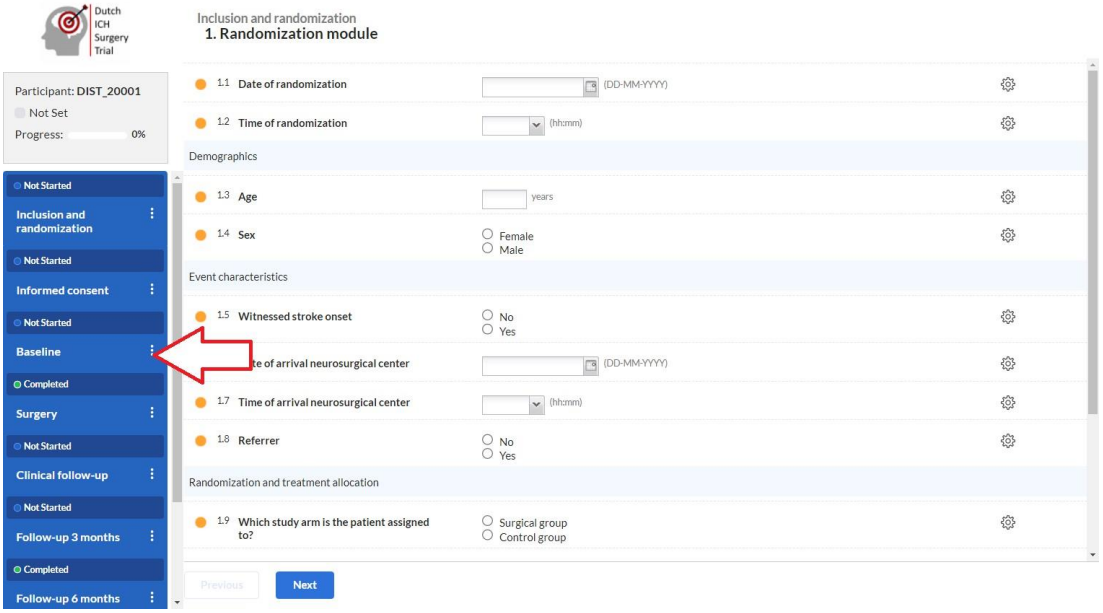
    https://academy.castoredc.com/p/getting-started-with-castor-free
3. If you are working with Castor EDC for the first time, we advise you to follow the online course 'Data entry in Castor EDC' (sections "Adding data" and "Reports"; total duration 15 minutes), via the following link:

    https://academy.castoredc.com/p/dataentry-free
4. Click on 'Dutch ICH Surgery Trial (DIST)'. An overview screen will then open of all DIST participants from your center.

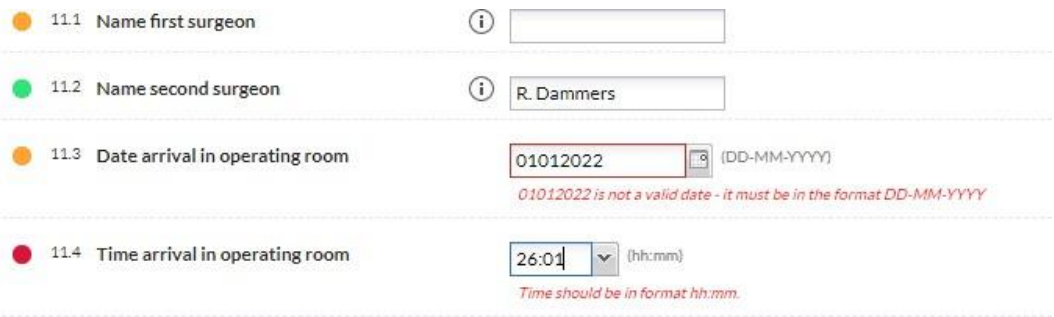


5. Click on the correct participant to open the record of the participant in question and start recording data in the eCRFs.

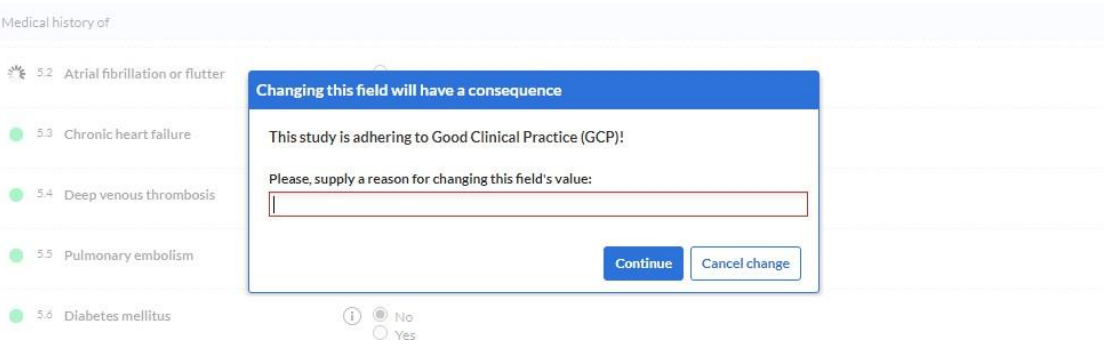
6. In the left-sided menu you can see an overview of all eCRFs that need to be filled in for this participant. Click on the name of the eCRF ('*visit*') and then on a sub-section ('*form*'), to open the relevant section of the eCRF and start filling it in.



7. Required fields are marked with a ● before the field (*required*). If a required field is filled in correctly, the dot changes to ● (*completed*).
If fields are not filled in according to the correct format, or the input exceeds the preset limits, this is explained with a comment and the dot changes to ● (*disabled*).



8. While filling in the form, all answers are immediately saved. If you want to change an answer later, you must provide a reason for this change (*audit trail*).



Entries that have been changed later are marked with a sign on the right, where the audit trial is displayed when you click on the icon.

9. If an item cannot be answered due to missing data or other known reason, it must be entered in Castor. To do this, use the icon on the right to select the '*user missing*' option.

Then, in the dialog box, indicate the reason why the data is missing from the displayed list, and briefly explain this reason in the text box. The standard reasons to choose from are:

a. **Measurement failed (-95):** Provide this reason if a measurement has been taken but the determination has failed (e.g. in the case of a hemolytic sample during lab collection)

b. **Not applicable (-96):** Provide this reason if a question does not apply to the patient in question.

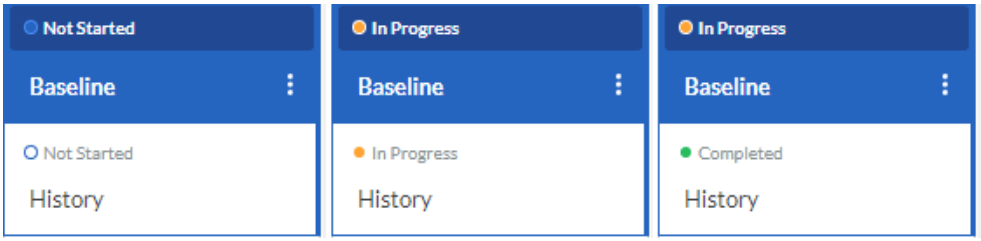
c. **Not asked (-97):** try to avoid this import. If possible, ask for the item in question.

d. **Asked but unknown (-98)**: Enter this reason if an item has been requested, but the answer to the question is unknown (e.g. unknown number of 'falls in the past year').

e. **Not done (-99)**: give this reason if a study action has not been performed (e.g. a lab value that has not been determined, or a blood pressure measurement that has not been taken).

The field marked as missing will be faded/grayed out in the form, but the status icon will update to indicate that the field has been filled in. A comment is added to the field with the reason entered.

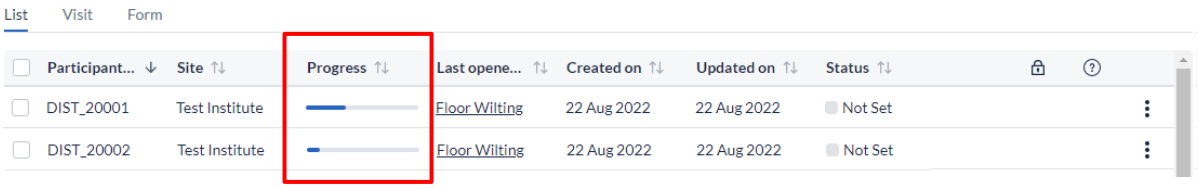
10. The progress of filling in a form is displayed in the left-sided menu above the relevant part of the eCRF by "○ Not started" if the eCRF is still empty, " ● In progress" if the eCRF is partially completed, and " ● Completed" if the eCRF is fully completed.



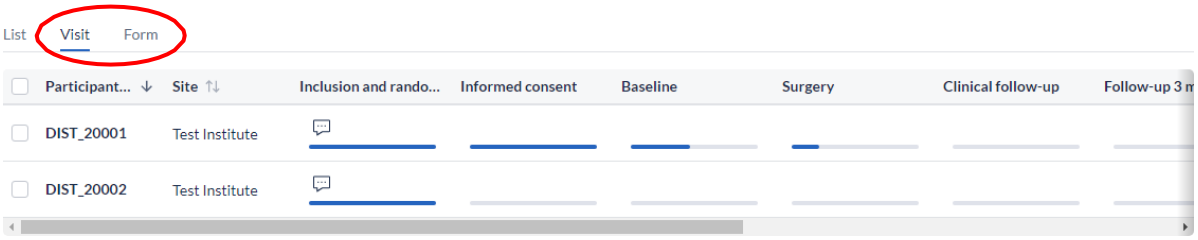
11. You can navigate between the different sections of the eCRFs by clicking on them in the left-sided menu, or by using the 'previous' or 'next' buttons at the bottom left of the screen to go to the previous or next eCRF section.

12. To go back to the overview screen of all DIST participants from your center, click on the ← Back to participants top left of the screen.

13. In the overview center, the progress of completing all eCRFs together per participant is visible via the *progress bar.*



To view the progress per participant per eCRF component at a glance, click on '*Visit*' or '*Form*'.



There are multiple *'Visits*' in Castor EDC with different '*Forms*' underneath. Below are the six relevant *'Visits'* for the local researchers:

Visit	Forms	Record data by
Inclusion and randomization	- Randomization module - Checklist of in- and exclusion criteria	Radboudumc
Informed consent	- Deferred consent (patient/proxy) - Deferred consent (patient second instance)	Local PI/RN Only signed as a 2nd form*
Baseline	- History - Physical examination - Lab results - Imaging - Acute treatment and treatment limitations - Other study procedures / SAE check	Local PI/RN
Surgery	- Procedural information	Local PI/RN (by neurosurgeon)
Clinical follow-up	- 24 hours follow-up - Day 6 ± 1 day follow-up - Discharge – neurosurgical center - Discharge – second hospital (transfer)	Local PI/RN
SAE	- Report SAE	Local PI/RN

* When deferred consent has been provided by a legal representative and the participants becomes legally competent during in the study period, new consent from the participant should be acquired.

6.7. Transfer from another hospital

If a patient may be eligible for the DIST, he/she can be transferred from a local hospital to a participating neurosurgical center. Verification of inclusion and exclusion criteria and subsequent randomization can only be performed at the neurosurgical center. It is required that a noncontrast brain CT and CTA are performed at the neurosurgical center before randomization, to determine the actual ICH volume and exclude underlying causes.

Participants should ideally remain admitted at the neurosurgical center until the last study procedures have been finished at day 6 (±1 day). Participants should not be transferred back to a referring center within 24 hours after randomization, and before transfer to the referring center the following procedures must have been done: 1) deferred consent must have been acquired; 2) non-contrast brain CT at 24h post-randomization must have been performed. In case of transfer, the referring hospital is requested to perform all study procedures, including non-contrast brain CT scans and NIHSS score on day 6 (±1 day). The follow-up CT brain will be funded from the study.

At transferal, the discharge letter must state that the patient is participating in a trial. Below are some drafts that can be included in the resignation letter:

In patients presented primarily in neurosurgical center:

- This patient is participating in the Dutch ICH Surgery Trial (DIST).
- Central telephone follow-up will be performed after 3, 6 and 12 months by a research employee.

For referred patients / transfers:

- This patient is participating in the Dutch ICH Surgery Trial (DIST).
- Please perform a non-contrast brain CT scan on day 6 (±1 day) after the ICH, or earlier in case of discharge.
- Take an NIHSS score on day 6 (±1 day) after the ICH (or earlier in case of discharge).
- Please send discharge letters and all brain imaging performed during admission.
- In the event of complications, immediately contact the study team at the neurosurgical center.
- Central telephone follow-up will be performed after 3, 6 and 12 months by a research employee.

6.8. SAEs

An SAE is an untoward medical occurrence in a patient or subject that does not necessarily have a causal relationship with the study and that:

- is lethal, and/or
- poses a danger to the subject's life, and/or
- requires hospitalization or extension of the hospital admission, and/or
- causes permanent or significant disability or incapacity for work, and/or
- manifests itself in a congenital defect or deformity, and/or
- could, in the opinion of the person conducting the scientific research, have developed into a serious undesirable occurrence, but in which case this serious undesirable occurrence did not materialize as a result of intervention.

SAEs will be tracked for the entire 1-year study duration. If an SAE occurs, it must be reported within 24 hours to the sponsor (Radboudumc).

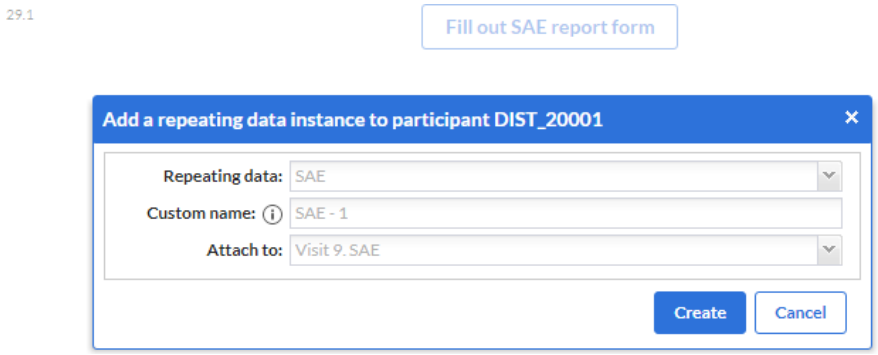
- Report **all SAEs** via dutchichstudie.neuro@radboudumc.nl and/or on the DIST telephone: +31- 6-1119 6911;
- Fill in an SAE CRF (in Castor EDC);
- Document/print this SAE CRF in the ISF.

The investigator from each participating center will report the following SAEs that occur during the study period directly to the sponsor after becoming aware of the events:

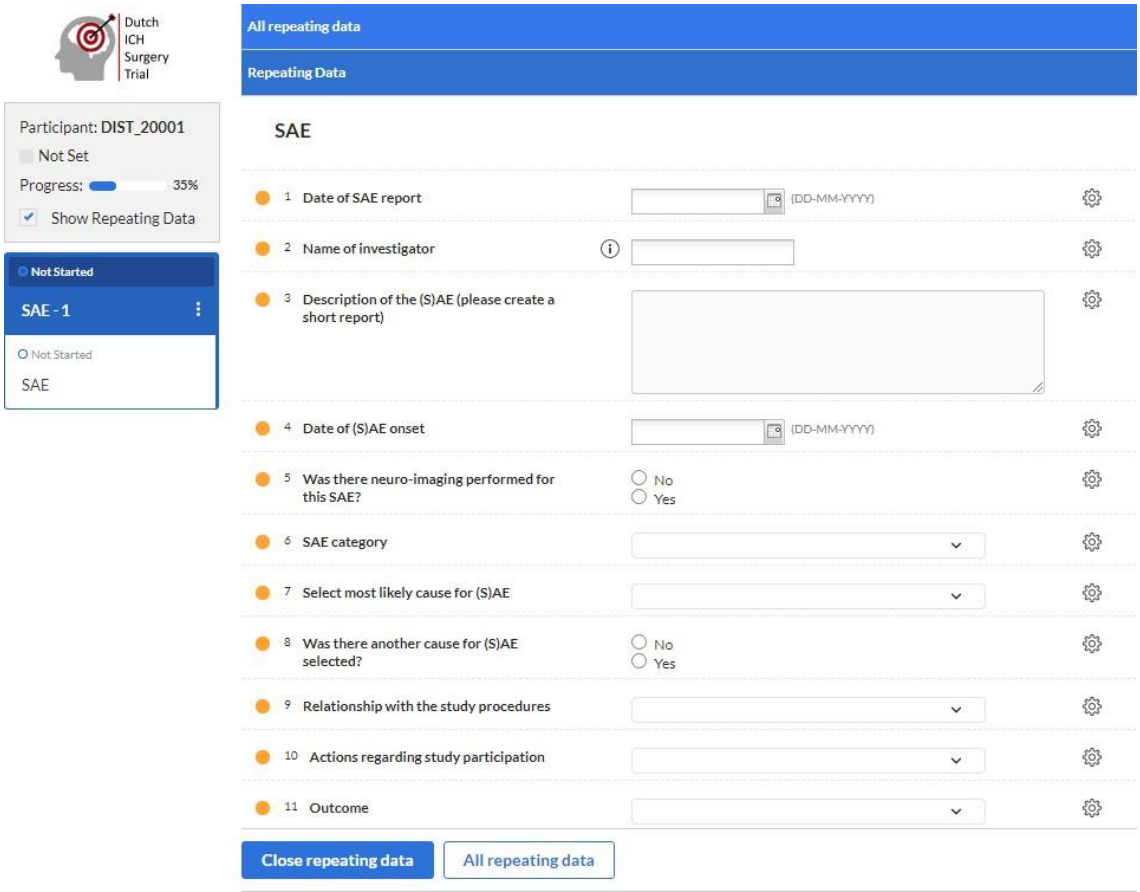
- Death (regardless of cause);
- New symptomatic intracerebral hemorrhage;
- Subdural/epidural hematoma;
- Stroke;
- Severe cardiac event;
- Pulmonary embolism.

(S) Entering AEs into Castor EDC:

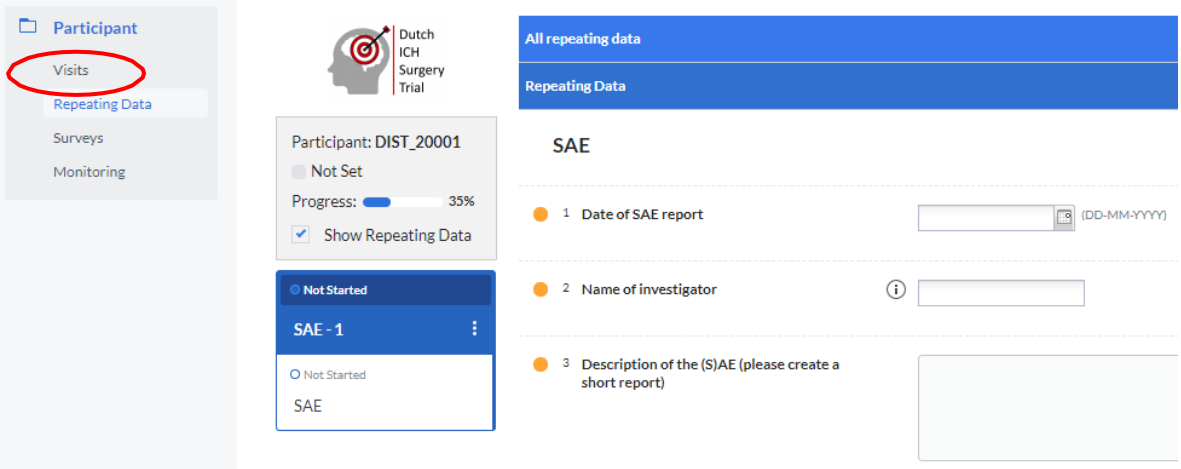
1. Login to the Castor EDC, click on 'Dutch ICH Surgery Trial (DIST)' and then click on the correct participant to open the record of the participant in question (see if necessary 6.5.2 filling in eCRF in Castor EDC)
2. Click on 'SAE' and 'report SAE'. Then click on 'Fill out SAE report form', after which a new window will open. Click on 'Create' to create a new SAE form.



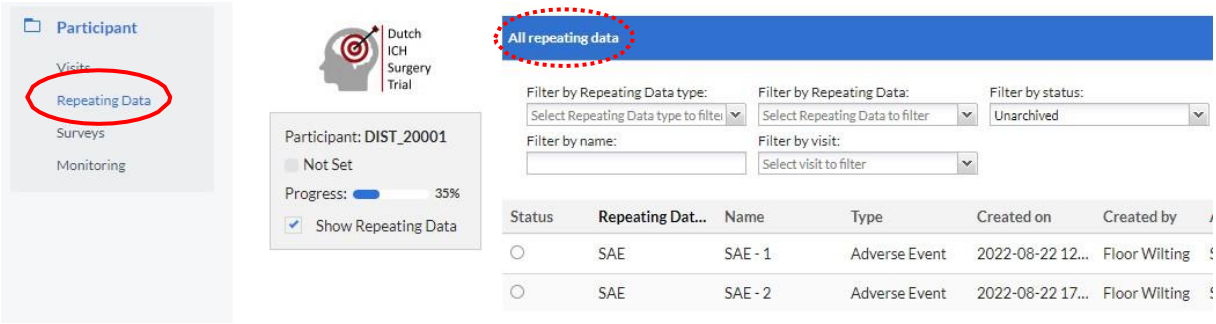
3. The SAE CRF opens (under '*Repeating Data*'). Fill in the form as completely as possible.



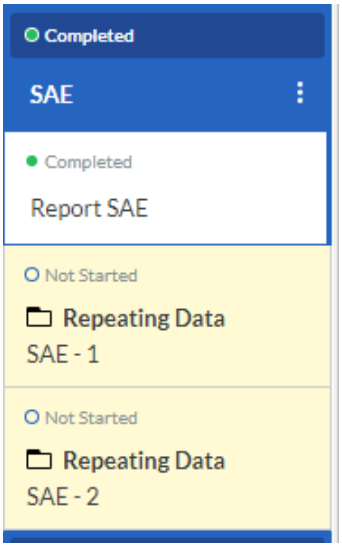
4. To go back to the rest of the eCRFs of the participant in question, click on 'Visits' on the far left side of the screen.



5. To see an overview of all SAEs per participant, click on 'Repeating Data' on the far left side of the screen. The list of all SAEs is shown under the heading 'All repeating data'. By clicking on the relevant SAE, you can open the SAE CRF to view/enter.



The SAEs can also be viewed (and adjusted if necessary) via the left-sided menu under 'Report SAE'. Again, the relevant SAE CRF can be opened by clicking on it.



6.9. Transfer of imaging data

All imaging that is relevant in the context of the ICH treatment and the DIST, is stored centrally on the imaging software platform XNAT (Health-RI). For the transfer of imaging data to the study team a separate document with instructions is made: 'SOP data upload XNAT'. Before transferring the images, it is important that they are pseudonymized.

Image data that has not been produced in the neurosurgical center must be collected by the neurosurgical center so that it can be sent to the study team. This is the case, for example, with the baseline imaging data produced at the referring center or the follow-up imaging data produced after the patient has been transferred. It is strongly recommended to store this data in the PACS of the neurosurgical center.

6.10. Follow-up

After 90, 180 and 365 days, central follow-up will be performed via telephone conversation and a paper questionnaire that is sent to the participant in advance.

During the phone call, the mRS, Barthel Index, EQ-5D-5L and SS-QoL will be taken, and the time spent at home by the participant during follow-up period.

7. RELATED DOCUMENTS

- Checklist Dutch ICH Surgery Trial
- CRF DIST Baseline
- CRF DIST Clinical follow-up neurosurgical center
- CRF DIST on paper (all combined)
- CRF DIST SAE form
- CRF DIST Second hospital (transfer)
- CRF DIST Surgery

- Research protocol DIST
- Patient information letter and consent forms (version A1/A2, B1/B2, C1/C2, D1/D2)
- SOP deferred consent
- DIST tools conversation in the acute phase
- DIST laboratory protocol
- Standard letter about follow up DIST
- Pocket card DIST
- SOP data upload XNAT

All important documents can be found on the DIST website: https://dutch-ich.nl/trial-protocol-and-documents.html

8. STUDY TEAM CONTACT DETAILS

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9. DOCUMENT HISTORY

Version	Description of change	Date of implementation
1.0	First version	10-10-2022
2.0	Second version following amendment 1 with the most important change, addition of the EQ-5D-5L on day 6 (±1 day)	24-03-2023

10. ATTACHMENTS

10.1. Appendix 1: NIHSS tip sheet

NIHSS Scoring			
Scale Item	Coma	Difficult or Confused	Tips
1a LOC Responsiveness	2 - for some movement 3 - Flaccid or no movement	0 - if awake, alert	Can usually tell score by greeting
1b LOC Questions	2	1 - ET tube, trauma, severe dysarthria; 2 - Aphasia,stupor, confusion	Score initial response; pt may write answers.
1c LOC Commands	2	2 - if unable to understand or follow the commands	You are not testing grip strength. May pantomime if pt doesn't respond to command; ok if impaired by weakness
2 Best Gaze	0 if normal eye movement noted	0 if patient able to track your movements	Coma - hold eyes open and turn head side-to-side. Confused - Make eye contact and move to other side of bed
3 Visual	0 if blinks to visual threat 3 if no blink in any field 3 if blind due to any cause	0 if blinks to visual threat 3 if no blink in any field 3 if blind due to any cause	Three ways to test - finger counting, finger movement or threat; test in 4 quads of each eye separately
4 Facial Palsy	3	If patient is verbal, observe for facial droop. If confused and nonverbal, use noxious stimulation to elicit grimace	Check NLF in advance; score 1 for minor asymmetry on smiling; score 2 major for asymmetry of smile; score 3 for absence of movement in upper **and** lower face
5a, 5b Motor arm	3 for no effort against gravity 4 for no movement at all	If unable to follow directions, use observation to score. Is the patient using the arm?	**UN**testable only with amputation or fusion.
6a, 6b Motor leg	3 for no effort against gravity 4 for no movement at all	If unable to follow directions, use observation to score. Is the patient moving the leg?	**UN**testable only with amputation or fusion.
7 Limb ataxia	0	0 if unable to follow directions	Absent if paralyzed or unable to understand. **UN**testable only with amputation or fusion
8 Sensory	2	Use pinprick and observe patient's reactions if patient unable to cooperate	Ask pt, "can you feel this, can you feel this, and does it feel the same on each side"; (do not ask if sharper/duller)
9 Best Language	3	Choose score for stupor/limited cooperation: 2 - listener carries burden of communication; 3 - garbled or mute AND not following commands	Best language and COMPREHENSION; describe scene, name objects and read phrases. If blind, place object in hand and have patient describe
10 Dysarthria	2	1 - Difficult to understand (regardless of cause), 2 - speech not understandable, garbled	Listen to their words; if they can't read - have them repeat words or listen to the words they do say **UN**testable only with physical barrier
11 Extinction and Inattention	0	Score only if present	Looking for lack of awareness with double tactile/visual stimulation
Reminders:	a. Perform and score in numerical order.	b. Accept first response. c. Do not coach.	

For a more detailed manual, see also: [NIH Stroke Scale]