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I. Start-up requirements

Each site is required to complete the following start-up requirements:

1) Ethics Approval
2) Regulatory documents
3) Training
4) Confidentiality statement signature

Sites may additionally require

- Signed Research Agreement/Data Use Agreement (site dependent)

II. Training

Principal investigators and study coordinators will be required to read the study protocol and the Manual of Operations.

III. Study Procedures

	Procedure Name	Screening	Baseline[2]	30D	90D	180D	360D	Yearly
Study Procedures	Screening Form	X						
	Consent	X						
	Baseline CRF[2]		X					
	Follow-Up CRF			X[4]	X[4]	X[4]	X	X
	Baseline Patient Questionnaire[1,2]		X					
	Follow-Up Patient Questionnaire[3]			X	X	X	X	X

[1]Baseline Questionnaires also include the following assessments: BTQ, PCL-5, PHQ-8, GAD-7, PROMIS Sleep Short Form, SAQ, MIDAS, MSQ Version 2.1.
[2]The baseline time point will be replaced with the event time point in patients who have a recurrent SCAD event. The corresponding Event Patient Questionnaire and CRF will need to be filled out.
[3]Follow up Questionnaires also include the following assessments: PCL-5, PHQ-8, GAD-7, PROMIS Sleep Short Form, SAQ, MIDAS, MSQ Version 2.1.
[4]Patients who have a SCAD event more than one year before enrollment will only need to have their CRF and patient questionnaires filled out annually.
Note: Regardless of time of enrollment, all patients will need to complete a baseline questionnaire and CRF.

a. Screening Procedures

Participating sites should screen patients admitted with myocardial infarction or completing outpatient visits for previous SCAD for the iSCAD Registry. Site operators should be trained on how to approach potential SCAD patients based on their clinical presentation and angiographic characteristics.

b. Suspected SCAD

Sites should consent patients with suspected cases of SCAD and send angiograms to the Data Coordinating Center for the Core Lab to review. Uncertain SCAD cases may include those that present as Type 3 dissection (see below for further definitions). Additional imaging modalities should be used to confirm SCAD diagnosis. OCT or IVUS are two modalities which may aid in the diagnosis of uncertain SCAD.

c. Suggested Imaging Studies

Investigators are encouraged to perform vascular screening from head to pelvis for the co-prevalence of fibromuscular dysplasia, aneurysm, and other extracoronary vascular abnormalities (AHA Scientific Statement on SCAD. Circulation 2018;137:00-00).

d. Suggested Laboratory tests

Every effort should be made to report laboratory tests performed in the routine care of the patient, particularly those drawn during the SCAD event (outside records may be reviewed to obtain missing values). These include (as applicable): troponin, CK, CKMB, ANA, ESR, CRP, hsCRP, BNP, lipid panel, and glycated hemoglobin.

e. Angiograms

Angiograms should be performed according to local institutional guidelines. Consideration for additional imaging such as OCT and IVUS may be used in cases where the diagnosis of SCAD is unclear by angiography alone. For cases where the diagnosis of SCAD is a suspected but uncertain, see section on “Suspected SCAD; Section III.b.” above.

f. Sending angiogram images

De-identified angiograms in DICOM (.dcm) format will be saved on a CD or DVD disc and mailed to the Data Coordinating Center The angiograms will be stored in a secure location at PERFUSE. The discs will need to be labeled with the patient’s study ID. An identification form should be mailed with the attached discs. File names should include the patient study ID number and the visit day. The following films should be mailed to the Data Coordinating Center to be reviewed by the study core lab:

I. Baseline coronary angiogram with LV gram and renal and femoral frames
II. Any OCT or IVUS imaging performed during the baseline angiogram
III. Any repeat angiograms during the study follow-up

g. Informed consent

This registry involves minimal risk research involving medical chart review and the administration of online surveys. Final approved and stamped versions of the consent form should be store on site. Please follow the institutional guidelines, SOPs, and all other regulatory requirements applicable to the site. Sites must use the current version of consent forms approved by their local IRBs. The site must notify the Data Coordinating Center when the patient is consented and the date of informed consent will need to be entered into the screening form when enrolling a patient.

h. Monitoring

No on-site monitoring is planned for the study. Data quality will be monitored by the Data Coordinating Center using data quality algorithms. Sites may be asked to verify entered data or respond to data queries.

IV. REDCap EDC

The REDCap EDC (Electronic Data Capture) database will be used for the iSCAD registry. Only the Data Coordinating Center will have login access to REDCap and is responsible for managing patient records and quality assurance. Sites should contact the Data Coordinating Center staff with any questions regarding data collection.

a. Screening Form

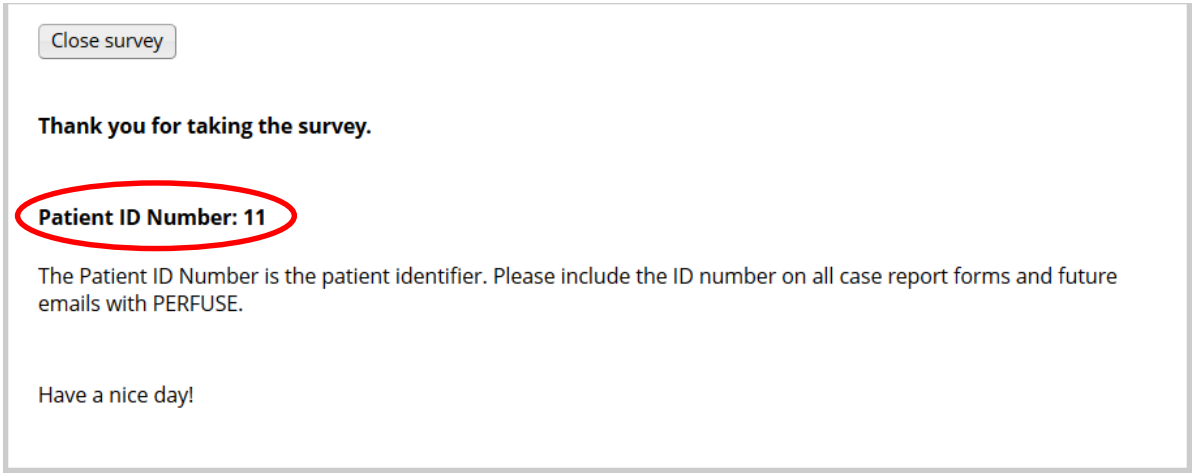
A REDCap link to a screening form can be accessed on the iSCAD Registry Portal. The screening form should be completed when a patient has signed the informed consent for the iSCAD Registry. The form contains inclusion and exclusion criteria to ensure eligibility along with a field for the patient's email address. Sites should explain to the patient that an email is required for the Data Coordinating Center to send the patient baseline and follow-up questionnaires and that emails will be kept confidential. Assuming a patient meets all inclusion and exclusion criteria, the patient questionnaire will be automatically sent to the patient's email after the screening form has been completed. Site investigators will then receive notification to complete the CRF. The Data Coordinating Center will receive a notification upon completion of the screening form.

Screening Form link: https://redcap.bidmc.harvard.edu/redcap/surveys/?s=XNXPD8RATX

i. **Site ID**
A three (3) digit site number will be assigned prior to the start of the registry.

ii. Patient ID
REDCap will automatically generate a sequential record number when a screening form is completed. This number is the patient ID and will be used to facilitate all communication for that specific patient. Sites should maintain a local record of registry patients and their respective patient IDs. The patient ID should be written on all corresponding baseline CRFs, event CRFs, follow-up CRFs, and angiograms. Patient IDs at each individual site may not be sequential.

An example of the screening form post-submission screen can be seen below. Outlined in the red oval is a sample patient ID number.



iii. Patients enrolled in more than one site

Investigators should ask new patients if they are already in this iSCAD Registry in order to confirm patients are not duplicated (e.g. this may occur if a patient moves). The patient should be consented to re-enroll. The investigator then notifies the Data Coordinating Center from which site the patient was originally enrolled along with the patient's email address used for original enrollment. The Data Coordinating Center will provide the new site with the patient's existing unique subject identifier, and the site investigator will proceed with documentation as a follow-up visit.

b. Case Report Form

i. Baseline CRF

CRFs will be completed at the baseline visit as defined by the protocol. Sites will be able to download the CRF from the iSCAD Registry Portal. Sites should complete a hard copy CRF, scan and then email this form to the Data Coordinating Center. All applicable angiograms will need to be mailed to the Data Coordinating Center's server. The Data Coordinating Center will enter this data into REDCap. The Data Coordinating Center will send bi-weekly reminder emails indicating delinquent CRFs to investigators/study staff until they are received.

ii. Follow-Up CRF

Follow-up CRFs should be completed for all follow-up visits according to the schedule outlined in the protocol. Sites should complete a hard copy CRF, scan and then email this form to the Data Coordinating Center. All applicable angiograms will need to be mailed to the Data Coordinating Center's server. Please note the follow-up CRF is an abbreviated version of the baseline CRF that is meant to assess any new events or new imaging performed since the previous visit. The Data Coordinating Center will send investigators/study staff a notification email on the protocol-determined follow up visit date to request completion of the follow-up CRF, if not already received. The Data Coordinating Center will send bi-weekly reminder emails indicating delinquent CRFs to investigators/study staff until they are received.

If a subject was previously being followed at another study site but relocates for whatever reason, the new site will need to contact the Data Coordinating Center and provide the center with the email the subject used to enroll in the study. The Data Coordinating Center

will then provide the site with the unique subject identifier already assigned. This will ensure continuity of data and reduce the risk of duplicate subjects. (see section IV.a.iii)

iii. Event CRF

Event CRFs will be completed at the time of a recurrent SCAD event. Sites should complete a hard copy CRF, scan and then email this form to the Data Coordinating Center. All applicable angiograms will need to be mailed to the Data Coordinating Center's server. Please note that the event CRF contains elements from the baseline and follow up CRFs and is meant to capture details specific to the recurrent SCAD event as well as any new events or images since the previous visit.
The investigators/study staff will also need to complete a REDCap form (see SCAD Recurrence Form below) indicating that the subject has had another SCAD event in order to adjust the patient questionnaire timeline accordingly.

c. Patient Questionnaires

i. Baseline Patient Questionnaire

The patient questionnaire is designed to collect detailed information regarding possible factors identified as potentially contributing to the development of SCAD or its recurrence. The patient will be emailed a REDCap link to the baseline questionnaire following consent. Patients can save their work and return to the questionnaire via the same link. The Data Coordinating Center will schedule four weekly reminder emails, which will be sent to the patient if he/she does not complete the survey. The link does not expire so the patient may still complete the questionnaire after this 4 week time period.

Significant emotional or physical stressors are of particular interest in SCAD patients. Patients will also be asked complete the following questionnaires through the baseline patient questionnaire:

- PTSD Checklist for DSM-5 (PCL-5)
- Patient Health Questionnaire 8 (PHQ-8)
- General Anxiety Disorder 7(GAD-7)
- PROMIS Sleep Short Form (PSF)
- Brief Trauma Questionnaire (BTQ)
- Migraine Disability Assessment (MIDAS)
- Migraine-Specific Quality-Of-Life Questionnaire (MSQ v2.1)
- Seattle Angina Questionnaire (SAQ)

ii. Follow-Up Patient Questionnaire

Follow-up patient questionnaires will be automatically sent by REDCap to the patient according to the schedule outlined in the protocol.

The follow up form is designed to detect any updates in the patient's medical or family history. Subjects will also be asked about whether or not they had another SCAD event. If they say yes, they will be asked about more details surrounding the SCAD event. They will also be informed that they will need to contact the site to let them know that a recurrent SCAD event has occurred.

The REDCap schedule of questionnaires will be programmed so that Day 0 is:

Timing of Index Event	Day 0
<1 year from enrollment	Date of index SCAD
> 1 year from enrollment	Date patient provides Informed Consent

These dates may be different than the date of the actual follow-up visit. Sites should remind the patient that he/she should have received or will be receiving a questionnaire if the visit occurred after or before the specified interval, respectively. The Data Coordinating Center will schedule four weekly reminder emails, which will be sent to the patient if he/she does not complete the survey. The link does not expire so the patient may still complete the questionnaire after this 4 week time period.

Patients will also be asked complete the following psychosocial questionnaires through the follow-up patient questionnaire:

- PTSD Checklist for DSM-5 (PCL-5)
- Patient Health Questionnaire 8 (PHQ-8)
- General Anxiety Disorder 7(GAD-7)
- PROMIS Sleep Short Form (PSF)
- Seattle Angina Questionnaire (SAQ)
- Migraine Disability Assessment (MIDAS)
- Migraine-Specific Quality-Of-Life Questionnaire (MSQ v2.1)

iii. Event Patient Questionnaire

The event questionnaire is designed to collect detailed information about the recurrent SCAD event as well as any changes in the medical or family history. The patient will be emailed a REDCap link to the baseline questionnaire following consent. Patients can save their work and return to the questionnaire via the same link. The Data Coordinating Center will schedule four weekly reminder emails, which will be sent to the patient if he/she does not complete the survey. The link does not expire so the patient may still complete the questionnaire after this 4 week time period.

Significant emotional or physical stressors are of particular interest in SCAD patients. Patients will also be asked complete the following psychosocial questionnaires through the baseline patient questionnaire:

- PTSD Checklist for DSM-5 (PCL-5)
- Patient Health Questionnaire 8 (PHQ-8)
- General Anxiety Disorder 7(GAD-7)
- PROMIS Sleep Short Form (PSF)
- Brief Trauma Questionnaire (BTQ)
- Migraine Disability Assessment (MIDAS)
- Migraine-Specific Quality-Of-Life Questionnaire (MSQ v2.1)
- Seattle Angina Questionnaire (SAQ)

d. Patient Discontinuation Form

The Patient Discontinuation Form should be completed if a patient indicates he/she does not want to continue participation in the registry or has died. The REDCap link to the Patient Discontinuation Form will be available on the iSCAD Registry investigator portal. Data Coordinating Center will contact sites to determine patient status if the patient does not complete three consecutive questionnaires. However, patient questionnaires will continue to be sent until a patient has discontinued the study. All attempts to contact or determine status of this patient should be made before submission of this form.

Patient Discontinuation Form link:
[https://redcap.bidmc.harvard.edu/redcap/surveys/?s=NW7Y8N79LL]

e. SCAD Recurrence Form

Sites should notify the Data Coordinating Center if a patient has a recurrent SCAD event so that the schedule of follow-up patient questionnaires and follow-up CRFs can be reset according to the protocol. A recurrent SCAD event is defined as a troponin positive, angiographically confirmed SCAD remote (>30 days) from the index dissection or in an angiographically distinct arterial bed. The REDCap link to the online Recurrent SCAD Event Form will be available on the iSCAD Registry investigator portal. Sites should complete the online form as soon as the site is aware of a recurrent SCAD event so that the patient may be sent an Event Patient Questionnaire.

Recurrent SCAD Event Form link:
[https://redcap.bidmc.harvard.edu/redcap/surveys/?s=PETF84MHEF]

f. Regulatory Compliance

The iSCAD Registry sites are responsible for obtaining and maintaining IRB approval at their institution. Site-specific study materials should be maintained in compliance as required by the local IRB.