Observational Registry Characterizing the Performance and Feature Use of the GORE® TAG® Conformable Thoracic Stent Graft featuring ACTIVE CONTROL System

Protocol Number: TAG 15-03

Amendment 1

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W. L. Gore & Associates, Inc.
Medical Products Division

PROTOCOL SUMMARY

Registry Title	Observational Registry Characterizing the Performance and Feature Use of the GORE® TAG® Conformable Thoracic Stent Graft featuring ACTIVE CONTROL System
Short Title	SURPASS
Protocol Number	TAG 15-03
Sponsor	W. L. Gore & Associates, Inc. Medical Products Division 3450 W. Kiltie Lane Flagstaff, AZ 86005 United States Telephone: +1 800-437-8181
Registry Design	Observational, prospective, single-arm, post-market registry
Registry Objective	Collect real-world clinical and device-specific outcomes of the GORE® TAG® Conformable Thoracic Stent Graft featuring ACTIVE CONTROL System (CTAG Device with ACTIVE CONTROL) in the treatment of aortic disease as part of routine clinical practice.
Registry Endpoint(s)	**Primary Endpoints:** 1. Procedural technical success [redacted] 2. Treatment Success at thirty (30) days defined as technical success and freedom from:

	Secondary Endpoints: 1. Freedom from the following Major Adverse Events (MAEs) through 12 months, described individually at the 30-day and 12-month visits: [redacted] 2. Treatment Success at 12 months as defined as technical success and freedom from: [redacted] 3. Freedom from the incidence of SAEs, other than MAEs, throughout the registry duration 4. Measures of Pathology-specific remodeling: [redacted]
Patient Population	Patients treated with the GORE® TAG® Conformable Thoracic Stent Graft featuring ACTIVE CONTROL System for diseases of the thoracic aorta
Selection Criteria	Inclusion criteria • Age ≥ 18 years • Signed informed consent form • Willingness to adhere to standard of care follow-up requirements • Surgical indication for TEVAR based on Investigator's best medical judgment • Intent to treat with CTAG Device with ACTIVE CONTROL. Exclusion criteria • Paraplegia or paraparesis at initial presentation • Participation in concurrent research study or registry which may confound registry results, unless approved by Sponsor • Prior implantation of a thoracic stent graft

	• Pregnant or breast-feeding female at time of informed consent signature • Life expectancy < 1 year due to comorbidities
Number of Patients	Up to 125 patients, intended to be treated with CTAG Device with ACTIVE CONTROL. • Total Site enrollment capped at 40 patients
Number of Sites	Up to 20 sites in Europe
Expected Time to Complete Enrollment	12 - 18 months
Schedule of Events	Pre-Treatment • Physical exam • Modified Rankin Scale • Computed Tomographic Angiography (CTA) of the Chest, Abdomen, and Pelvis, with oblique, sagittal, and coronal reconstructions Follow-up Visits (Data Collection for One Year) Per standard medical practice at each participating site: • Modified Rankin Scale • Computed Tomographic Angiography (CTA) of the Chest • Pathology may necessitate extension of scan range to pelvis (*e.g.,* dissection)

Coordinating Investigator	Professor Giovanni Torsello [redacted] Germany
Vendors	Contract Research Organization [redacted] Electronic Data Capture System [redacted]

LIST OF ABBREVIATIONS

AE	Adverse Event
AIS	Abbreviated Injury Scale
ASA	American Society of Anesthesiologists
CDMS	Clinical Data Management System
CE	Conformité Européenne
CEC	Clinical Events Committee
cm	Centimeters
CRF	Case Report Form
CRO	Contract Research Organization
CT	Computed Tomography
CTA	Computed Tomographic Angiography
CTAG Device	GORE® TAG® Conformable Thoracic Endoprosthesis
CTAG Device with ACTIVE CONTROL	GORE® TAG® Conformable Thoracic Stent Graft featuring ACTIVE CONTROL System
DTA	Descending Thoracic Aorta
EC	Ethics Committee
EDC	Electronic Data Capture
eCRF	Electronic Case Report Form
ePTFE	Expanded Polytetrafluoroethylene
FEP	Fluorinated ethylene propylene
Fr	French (sizing)
GCP	Good Clinical Practice
GCS	Glasgow Coma Scale
ICF	Informed Consent Form
IFU	Instructions for Use
ISS	Injury Severity Score
NYHA	New York Heart Association
mm	Millimeters
MAE	Major Adverse Event
mRS	Modified Rankin Scale
PI	Principal Investigator
SAE	Serious Adverse Event
TEVAR	Thoracic Endovascular Aortic Repair

1. Introduction

1.1. Background

Thoracic endovascular aortic repair (TEVAR) with stent graft implantation is becoming the first therapeutic option for treating thoracic aorta pathologies, both in the elective and in the emergency setting.

Several reasons, including reduced perioperative mortality and lower rate of major life-threatening complications, make this minimally invasive approach the preferred choice over the conventional open repair, even for those patients who are unfit for open surgery, due to comorbidities and high risk clinical conditions.[1-3]

To date, even if no clinical data from randomized trials comparing TEVAR versus open repair are available, better procedural and mid-terms outcomes of TEVAR are corroborated by several published non-randomized clinical experiences, comparing endovascular repair with a concurrent or historical open surgical group, and comprehensive meta-analyses with meta-regression of available comparative studies.

Positive clinical outcomes, obtained with the endovascular treatment of the descending aorta, induced operators to test endovascular devices in higher risk settings, such as pathologies of the aortic arch and ascending aorta, trying to reduce the extremely high incidence of mortality and major complications (stroke) associated with open repair of these thoracic aortic segments.[4-7]

It is recognized that an important factor in TEVAR success, specifically in the aortic arch, is dependent on its morphology and the ability of the stent graft to seal off the area of disease or injury by appropriate fixation at the proximal and distal landing zones in the normal aorta.[8-12]

In 2010, W. L. Gore & Associates, Inc. (Gore) introduced on the market the new GORE® TAG® Conformable Thoracic Endoprosthesis (CTAG Device), designed to safely and effectively treat multiple thoracic aortic pathologies including aneurysm, type B complicated dissection, and traumatic transection, while improving treatment of small diameter, tortuous, and tapered aortic anatomy.

Since then, use of CTAG Device has shown excellent performance in several clinical experiences.[13, 14]

[redacted]

1.2. Registry Rationale

Post-market observational registries are critical to identify, collect, and analyze medical devices outcomes. As the nature of these registries allows for the assessment of medical device performance in a real-world setting, data collected are useful for many purposes, such as short- and long-term surveillance of marketed products, fulfillment of post-market observational registry commitments for regulatory bodies, bridging the gap between device performance in clinical trials, and their use in routine practice over time.

[redacted]

[redacted]

For detailed description and use of the device, please refer to the Instructions for Use (IFU).

2. Registry Objectives

2.1. Primary Objective

The primary objective of the registry is to collect real-world clinical and device-specific outcomes of the CTAG Device with ACTIVE CONTROL in the treatment of aortic disease as part of routine clinical practice.

3. Registry Design

3.1. Description of Registry Design

This registry is an observational, prospective, single-arm, post-market registry. A maximum of 20 clinical investigative sites (referred to as "sites" in the remainder of this document) in Europe will participate in this registry. Up to 125 patients, in total, will be enrolled in the registry. The anticipated accrual rate is approximately two patients per month per site for a total accrual period of approximately 12 – 18 months. The total estimated registry duration is 30 months. A maximum enrollment cap of forty (40) patients at any one site will be instituted to ensure that the registry is composed of multi-center data.

Patients may be enrolled into the registry provided all inclusion and no exclusion criteria are met as specified in **Sections 4.2** and **4.3.** All consecutive patients meeting protocol selection criteria, consented, with an intention to be treated with CTAG Device with ACTIVE CONTROL will be included in the registry. Patients will be evaluated through hospital discharge and at their anticipated short term (approximately 30 days after the procedure) and first annual (approximately 12 months) follow-up evaluations. Additional follow-up visits in this 12 month period will be done according to standard of care at each site and should be documented accordingly. The timing of the follow-up evaluations are consistent with standard medical surveillance for a post thoracic stent-graft patient. Due to its observational nature, the registry will not require the use of a registry device in a specific pathology, the number of patients in a particular pathology, or the scope of the registry device's use once inclusion / exclusion criteria have been verified.

3.2. Registry Endpoints

3.2.1. Primary Endpoints

1. Procedural technical success, [redacted]
   - [redacted]
   - [redacted]
   - [redacted]
   - [redacted]
2. Treatment Success at the 30-day visit (see follow-up visit window schedule in **Table 2**) as defined as technical success and freedom from:
   - [redacted]
   - [redacted]
   - [redacted]
   - [redacted]

3.2.2. Secondary Endpoints

1. Freedom from the following Major Adverse Events (MAEs) through 12 months, described individually at the 30-day and 12-month visits (see follow-up visit window schedule in **Table 2**).

[redacted]

2. Treatment Success at 12 months defined as technical success and freedom from:

[redacted]

3. Freedom from the incidence of SAEs, other than MAEs, throughout the registry duration
4. Measures of Pathology-Specific Remodeling:

[redacted]

4. Registry Population

4.1. Description of Population

All consecutive patients presenting with an indication for endovascular repair of the thoracic aorta, in accordance with applicable guidelines for endovascular interventions, are eligible for screening for participation in the registry. Enrolled patients will be characterized by common risk classification scales, anatomical presentation, and applicable, pathology-specific descriptors as described in **Sections 13.1 and 13.2.**

Only patients who meet all of the inclusion criteria and none of the exclusion criteria may be enrolled.

4.2. Inclusion Criteria

1. Age ≥ 18 years
2. Signed informed consent form
3. Willingness, in the opinion of the investigator, to adhere to standard of care follow-up requirements
4. Surgical indication for TEVAR based on investigator's best medical judgment
5. Intent to treat with CTAG Device with ACTIVE CONTROL.

4.3. Exclusion Criteria

1. Paraplegia or paraparesis at initial presentation
2. Participation in concurrent research study or registry which may confound registry results, unless approved by Sponsor
3. Prior implantation of a thoracic stent graft
4. Pregnant or breast-feeding female at time of informed consent signature
5. Life expectancy < 1 year due to comorbidities

5. Registry Procedures / Evaluations

Due to its observational nature, the registry will not require the use of any procedure and / or test and / or medical device different from those required by routine clinical practice for treating the investigated pathology.

The sponsor will not impose requirements that limit health care professionals from exercising their best medical judgment for treatment. Therefore, patient selection, diagnostic imaging, and treatment interventions will be determined by physicians based on clinical practice standards.

5.1. Registry Procedures and Evaluation Schema

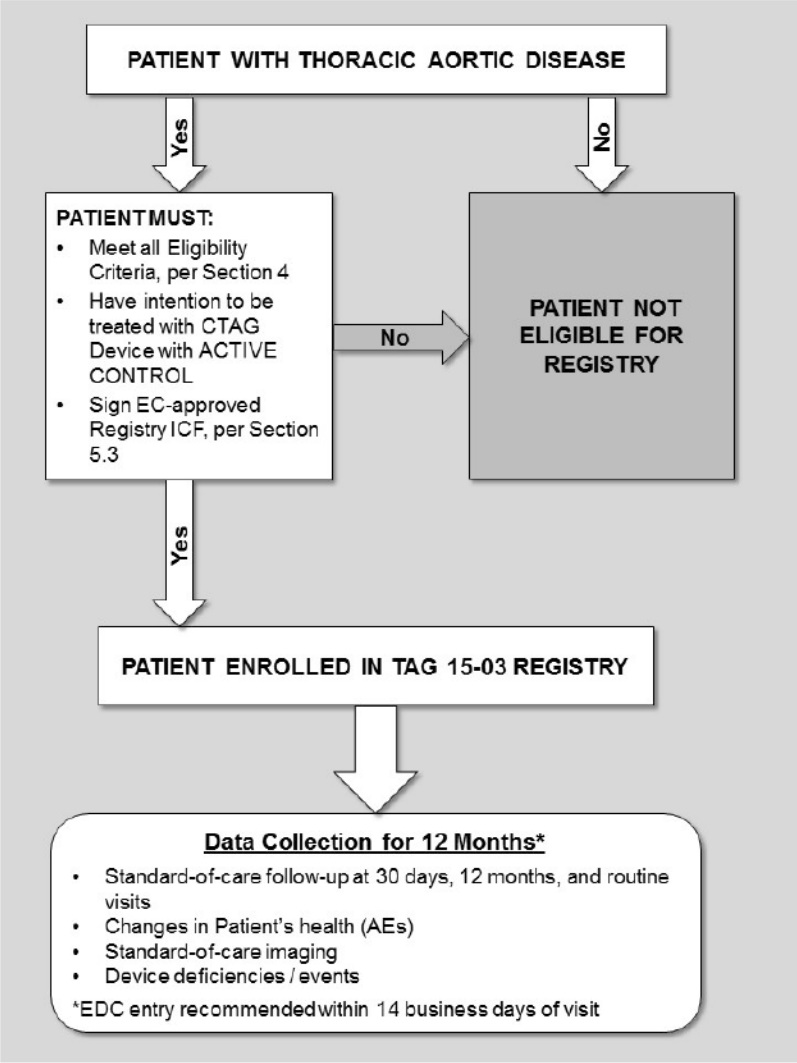

Figure 2: Registry Activity Flowchart

5.2. Schedule of Events

Anticipated assessments for data collection are described in **Table 1.** Visit intervals for organization and reporting purposes are provided in **Section 5.7**.

Table 1: Schedule of Events

	Screening	Procedure	Discharge	30-day Follow-up*	Additional Routine Follow-up*	12 Month Follow-up*
Informed Consent	X					
Demographics and Medical History	X					
ASA and NYHA	X					
Physical Exam	X					
Modified Rankin Scale, if able	X			X	X	X
Post-deployment Angiogram		X				
Assessment of Adverse Events			X	X	X	X
CT Angiogram, per standard of care**	X		X	X	X	X

*Per clinical practice follow-up standards
** A CTA at either discharge or at 30 days is expected, as well as at least one follow-up CTA in the follow-up time after 30 days

5.3. Informed Consent Process

As this protocol is not requiring procedures different from those routinely performed to treat thoracic pathologies with a thoracic endovascular stent graft, patients will provide written informed consent to authorize Gore to collect, process, and disseminate their demographic and clinical data, according to applicable data protection laws and regulations. Any documents provided to Gore will be processed by the site to remove any information that could identify the patient.

Patients are asked to sign an Ethics Committee (EC)-approved informed consent form (ICF) prior to the device implant. The EC-approved ICF will be signed and dated by the patient as well as the person who administered the ICF. In the event it is not possible for the patient to provide consent prior to the implant, *e.g.,* in an emergency situation, consent may be obtained afterward, but it should occur prior to discharge.

Each patient will be informed of his / her right to withdraw from the registry at any time, without compromising his / her treatment.

The original, signed ICF will be retained in the patient records along with a brief note detailing the consenting process. A copy of the ICF will be given to the patient for their records.

5.4. Screening Assessment

5.4.1. Patient Evaluation and Categorization

Patients will be evaluated for the registry based upon current physical status, pertinent medical history, risk categorization scales, and pathology-specific descriptors. Computed Tomographic Angiography (CTA) will be performed to assess anatomical candidacy for the CTAG Device with ACTIVE CONTROL to include diameter / length measurements, characterization of aortic anatomy, and perform device case planning. The standardized scales and descriptions used to define and describe the registry population are described in **Appendix B** and **Appendix C** of the protocol.

[redacted]

5.5. Procedure

The device implant procedure should be performed according to each participating site's standard practice. No specific procedures are required by the protocol.

A patient is considered enrolled in the registry once the CTAG Device with ACTIVE CONTROL delivery catheter is introduced into the vasculature and the EC-approved ICF is signed by the patient.

Patients who do not undergo successful deployment of the CTAG Device with ACTIVE CONTROL will be followed for safety events through their 30-day follow-up visit, then discontinued. Unsuccessful deployment is defined as introduction of the CTAG Device with ACTIVE CONTROL delivery catheter into the vasculature but not deployed within a patient. The introduction of an introducer sheath, by itself, would not be considered an unsuccessful deployment. Additional adjunctive treatments to the TEVAR implant procedure may be performed at the discretion of the investigator. Additional treatments performed at the time of the initial procedure will be recorded in the "Adjunctive Treatment" section of the Treatment Electronic Case Report Form (eCRF).

5.6. Additional Interventions

Additional interventions may be performed at the discretion of the investigator. An additional planned intervention may occur during the initial procedure or as part of a staged procedure. A staged procedure is defined as the intentional completion of the endovascular repair in multiple temporarily separate procedures. An additional planned or unplanned intervention occurring during the initial procedure should be captured in the Adjunctive Treatment Section of the Treatment eCRF. An additional planned intervention occurring as part of a staged procedure should be captured on the Additional Treatment eCRF.

An additional unplanned intervention (defined as unanticipated, additional surgical or endovascular intervention) occurring after the initial procedure meeting either of the following definitions will be considered a reintervention:

1. Associated with an Adverse Event (AE). These reintervention procedures will be captured as AE treatments on the Adverse Event eCRF.
2. Any cardiothoracic surgery or percutaneous intervention catheter procedure that repairs, otherwise alters or adjusts, or replaces a previously implanted stent graft used in the primary procedure.

Patients undergoing a reintervention should be kept in the registry and followed-up according to the participating site's standard practice.

5.7. Follow-Up Visit Windows

Patients' follow-up should be performed according to the site's standard of care, with a minimum of two follow-up visits, conducted at approximately 30 days and again at approximately 12 months following the initial procedure. For registry reporting, the follow-up visit windows are defined according to **Table 2**.

Table 2: Follow-Up Visit Windows

Follow-up Visit	Visit Window (days)
30 Days	15-59
Additional Routine Follow Up Visits	60-274
12 Months	275-455

5.7.1. Interim Follow-Up Visits Windows

Registry investigators may elect to employ a more intensive follow-up regimen that is part of their standard practice or tailored to the medical needs of his / her patient. Device evaluations conducted outside of the protocol-described follow-up visit windows are requested to be entered into the Electronic Data Capture (EDC) system. These interim evaluations may provide additional context to identified AEs.

5.8. Patient Withdrawal from the Registry

A patient may withdraw from the registry at any time and should notify the investigator in this event. The investigator, in this case, should complete the appropriate Discontinuation eCRF.

5.9. Patient Lost to Follow-Up

The investigator should encourage patients to complete all routine follow-up visits and notify them of significant changes in their health, especially when potentially device-related (*e.g.,* reinterventions) events occur.

Due to the brief follow-up period for the registry, an enrolled patient cannot be considered lost to follow-up by the investigator until the follow-up visit window of 12 months has elapsed. Investigators are expected to collect device performance data during this time according to good clinical practice. This includes utilizing varied contact methods (*i.e.,* phone, mail, and certified mail) to secure follow-up data or contacting family for updated contact information or to check on the vital status of the patient.

5.10. Patient Registry Completion

A patient has completed the registry when he / she completes the 12 month follow-up visit, according to the visit window reported in **Table 2**.

Any patient that does not complete these requirements due to voluntary withdrawal, physician withdrawal, death, or any other reason will be considered a withdrawal. Since patients are being treated per standard of care, they will not be provided with any medical care by Gore.

5.11. Device Deficiencies

Device deficiencies are defined by ISO 14155 as inadequacy of a medical device with respect to its identity, quality, durability, reliability, safety, or performance. Device deficiencies include malfunctions, use errors, or inadequate labelling.

As CTAG Devices with ACTIVE CONTROL are commercialized medical products, device deficiency reporting will follow established, country-specific complaint reporting processes and product surveillance mechanisms in addition to entry into the EDC system on the appropriate eCRFs.

[redacted]

6. Registry Administration

6.1. Monitoring

Site monitoring for this registry will be provided by [redacted] with oversight provided by Gore.

The monitors are qualified by training and experience to oversee the progress of the registry at the site and will verify that investigators and their staff understand and adhere to both the applicable regulatory requirements and the registry protocol. In addition, they may assist in resolution of any problems that may arise during the registry.

6.1.1. Site Initiation

Site initiation will be performed to verify that each investigator and his / her staff understands the protocol, applicable regulations, human patient protection requirements, and the investigator's obligations. This visit will confirm that required documentation with the appropriate approval is in place prior to patient enrollment.

6.1.2. Periodic On-Site Monitoring [redacted]

Periodic, on-site monitoring will occur as necessary to verify continuing adequacy of facilities and adherence to the registry protocol, GCPs, and applicable regulations and laws that pertain to the conduct of the registry. These activities will also review the CRFs and source documentation, the timely submission of accurate records to Gore, and the maintenance of proper records. A report will be written following each site visit and a follow-up letter will be provided to the site with a summary of findings. Each site will also be visited at close-out to confirm that all documentation is complete.

[redacted] Informed consent documentation for all patients will be reviewed at an on-site visit to verify that all patients agreed to registry participation. Monitoring procedures and requirements will be documented in a clinical monitoring plan developed and maintained by Gore.

6.2. Device Accountability

Participating sites will adhere to their current commercial contractual agreement with Gore or designee for device shipping, storage, use, and return. Reference and lot number of implanted devices or opened, unused devices will be collected on eCRFs.

6.3. Protocol Deviations

A protocol deviation is defined as any change, divergence, or departure from the registry design or procedures of a research protocol. The investigator is responsible for promptly recording and reporting protocol deviations to Gore and the reviewing EC per their policy.

For the purpose of this registry, as implant procedures and follow-up visits will be performed according to participating sites' standard practice, protocol deviations would only affect the informed consent signature process or patient enrollment process.

Gore will determine the effect of the protocol deviation on the scientific soundness of the registry as well as patient safety and determine if additional reports or actions are required. Additional action may include site retraining, and / or site termination.

6.4. Protocol Amendments

Sponsor will submit to ECs all amendments for approval in a timely manner and will confirm proper training of investigator and site staff on all protocol amendments, if needed.

6.5. Access to Source Data / Documents

Source data are defined as all information necessary for the reconstruction and evaluation of the registry.

The investigator will keep all registry records and source data available for inspection by Gore, Gore's monitors, EC, and regulatory authorities.

6.6. Registry Records Retention

The investigator will maintain complete, accurate, and current registry records as required by applicable regulatory requirements. Records will be maintained during the registry and for a minimum of five years after registry is completed or terminated. In any event, registry records will not be disposed of, nor custody of the records transferred, without prior written sponsor approval.

Investigator records will include, but not be limited to:

- All correspondence with another investigator, an EC, Gore, a monitor, or regulatory authority, including required reports.
- Records of each patient's case history and exposure to the device. Case histories include the CRFs and supporting data including, for example, signed and dated consent forms and medical records, including progress notes of the physician, the individual's hospital chart(s), and the nurses' notes. Such records shall include:

- The protocol, any amendments, annual registry report, and documentation of any deviations from the protocol, including the dates and the reasons for such deviations.
- Any other records that regulatory authorities require to be maintained by regulation or by specific requirement for a category of investigations or a particular investigation.
- Any other records as required by the regulatory authority, the EC, or Gore.

[redacted]

7. Data Collection and Submission

The Clinical Data Management System (CDMS) for this registry will be provided by:

[redacted]

7.1. Data Collection Methods

This registry will report clinical data using [redacted] CDMS system. The CDMS will be the database of record for the protocol and may be subject to regulatory inspections. All users will be trained to use the CDMS and will comply with registry-specific guidelines / instructions as well as applicable regulatory requirements.

Patient data will be collected using protocol-specific eCRFs. Site staff will enter data directly into the eCRF for transmission to the sponsor. The sites will be notified of any significant amendments to the eCRFs.

7.2. Data Clarification and Correction

Once entered, data will be evaluated to confirm that they are complete, consistent, and logically sound. If changes to the data in the CDMS are required, all changes, reasons for changes, and persons making the changes will be captured in the CDMS's audit trail.

7.3. CRF Completion Schedule

Entry of patient data into the EDC system cannot occur prior to the collection of the patient's informed consent to participate in the registry. EDC entry should be contemporaneous with a goal of complete study visit entry within 14 days of a clinical evaluation.

8. Expected Benefits and Potential Risks

Participation in this observational registry is not expected to provide any direct benefits to participating patients, other than those related to the treatment of the thoracic aortic pathology. However, the data collected during the registry will foster a better understanding of the performance of the registry devices in real world, daily application.

Moreover, as the registry will not require the use of any procedure and / or test and / or device different from those required by routine clinical practice for the investigated condition, enrolled patients will not be exposed to additional risks as compared to routine clinical practice.

9. Adverse Events and Safety Monitoring

Adverse Events (AEs) are defined as any untoward medical occurrences in a patient whether device-related or not. For the purpose of this registry, all adverse events, regardless of seriousness or relationship, will be reported in accordance with applicable regulations, collected into the appropriate eCRF form, and documented in the patient's permanent medical record. The investigator at each site is ultimately responsible for reporting SAEs and device events to the sponsor.

The following information will be collected for each reportable event:

- Adverse Event Description
- Adverse Event Onset Date
- Relationship
- Classification
- Treatment
- Outcome
- Resolution Date

All reportable events will be coded using the Medical Dictionary for Regulatory Activities (MedDRA).

Event guidelines:

- Reporting begins once the patient is enrolled in the registry. All reportable events will be collected from enrollment through registry completion / discontinuation.
- Provide a diagnosis if possible. If unable to provide a diagnosis, report the symptoms as separate events. Reportable events will include a description that is free of abbreviations or narratives.
- Reportable events with an outcome status of "Ongoing" should be assessed at each follow-up evaluation to determine if the event has resolved. SAEs ongoing at registry completion / discontinuation should be left as "Ongoing" on the SAE case report form.

9.1. Adverse Events Classification

Each AE will be assessed by the investigator to determine if it is serious or non-serious, according to ISO 14155:2011. An SAE is defined as satisfying any of the following:

- led to death
- led to serious deterioration in the health of the patient that either resulted in
  - a life threatening illness or injury, or
  - a permanent impairment of a body structure or body function, or
  - inpatient or prolonged hospitalization, or
  - medical or surgical intervention to prevent life threatening illness or injury or permanent impairment to a body structure or a body function
- led to fetal distress, fetal death or a congenital abnormality or birth defect

A planned hospitalization for a pre-existing condition, without serious deterioration in health, is not considered an SAE.

Any AE that does not meet the criteria for SAE is termed a non-serious adverse event.

9.2. Event Relationship

Each reported event will be assessed by the investigator for its primary suspected relationship, according to the following definitions:

- **Registry Device-related**
  The functioning or characteristics of the registry device caused or contributed to the event.
- **Registry Procedure-related**
  The procedure to implant the registry device (and not the registry device itself) caused or significantly contributed to the event.
- **Not-related**
  An event which cannot be attributed to the registry device or procedure.
- **Unknown relationship**
  The relationship of the event to the registry device, procedure, or disease cannot be determined.

Event relationships initially reported as “Unknown” will need to be re-evaluated, when feasible, to foster a more definitive causality for event reporting and device attribution.

[redacted]

9.4. Clinical Event Committee

A Clinical Events Committee (CEC), [redacted] who are independent of Gore and with relevant clinical expertise, will ensure consistent and accurate reporting for select AEs and all deaths. Candidate events for CEC adjudication will be identified using a systematic process for events that may contribute to a registry secondary endpoint, associated with death or individually asked for adjudication by Gore.

The CEC will review and confirm identified events for causality and severity with an assessment on potential applicability to registry secondary endpoints.

[redacted]

10. Statistical Analysis

[redacted]

[redacted]

[redacted]

10.4. Data Analysis

10.4.1. Timing of Analyses

The final analysis will be performed when all patients have completed their 12 month follow-up visit or have been withdrawn from the registry. Analyses will be performed as needed for annual reports. [redacted]

10.4.2. Analysis Populations

All enrolled patients meeting the inclusion / exclusion criteria and treated with the CTAG Device with ACTIVE CONTROL will be included in the primary and secondary endpoint analyses.

10.4.3. Statistical Analysis of Primary Endpoint(s)

Tables of the primary endpoints—procedural technical success and treatment success at 30 days will be reported. Data will be presented descriptively with confidence intervals.

10.4.4. Statistical Analysis of Secondary Endpoint(s)

Tables of the secondary endpoints—incidence of MAEs, incidence of SAEs, and pathology-specific measures of remodeling will be reported. Data will be presented descriptively with confidence intervals, where appropriate.

[redacted]

11. Ethical and Regulatory Considerations

11.1. Statement of Compliance

The registry will be conducted in compliance with this protocol, ISO 14155:2011, and local applicable regulatory requirements.

The following are applicable to this registry:

Medical Device Directive (93/42/EEC) Article 15 Annex X	Council Directive 93/42/EEC of 14 June 1992
Amendment to the MDD (2007/47/EC) Article 15 Annex X	Directive 2007/47/EC of the European Parliament and of the Council of 5 September 2007

ISO 14155:2011 (E)	Clinical investigation of medical devices for human subjects – Good clinical practice

11.2. Compliance Responsibilities

Gore will conduct the registry in accordance with all applicable regulations and laws. Gore will be responsible for documenting that investigators have the necessary skills, training, and information to properly contribute to the registry. Investigators are physicians who have stent-graft implant privileges and can coordinate medical follow-up following the procedure. Other delegated staff such as research coordinators, physician assistants, or nurse practitioners cannot serve in the role of investigator. Gore will confirm proper monitoring of the registry and verify that the site has obtained EC approval prior to enrollment. Gore will provide information to the investigators and the reviewing ECs, if needed, concerning the progress of the registry.

The investigator will conduct the registry in accordance with all applicable regulations and laws, any relevant agreements, the protocol, and all approval conditions of the reviewing ECs. The investigator and Gore will verify EC approval is obtained prior to enrollment, maintained throughout the course of the registry, and that all EC reporting requirements are met. The investigator is responsible for protecting the rights, safety, and welfare of patients under the investigator's care. The investigator is also responsible for ensuring that informed consent is properly obtained.

The registry shall be conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki.

11.3. Informed Consent

The investigator shall verify that all potential patients for this registry are provided with an EC-approved ICF describing the registry with sufficient information to make an informed decision about their participation.

The formal consent of a patient, using the EC-approved consent form, should be obtained by the investigator before that patient undergoes the initial procedure or, in case of emergency, prior to hospital discharge. The consent form will be signed and personally dated by the patient and the person who conducted the informed consent discussion. The original signed ICF will be retained in the patient records. A copy of the informed consent document will be given to the patient for his or her records. Any significant, new information which emerges while the registry is in progress that may influence a patient's willingness to continue to take part in the registry will be provided to the patient.

The investigator shall verify that documentation of the acquisition of informed consent is recorded in each patient's records in accordance with applicable regulations.

11.4. Independent Ethical Review

The investigator shall not enroll any patients prior to obtaining approval for the registry from his or her site's EC.

The sponsor and / or designee will be responsible for submission of the investigator's brochure, protocol, draft ICF, eCRF (data requirements), and any other document required by each local EC, for EC's written approval.

11.5. Conflict of Interest

All investigators will follow applicable laws and regulations as well as the conflict of interest policies of their site and the reviewing EC.

11.6. Confidentiality

All patient records will be kept confidential to the extent provided by applicable laws and regulations. The registry monitors and other authorized representatives of Gore may inspect all documents and records required to be maintained by the investigator, including but not limited to, medical records.

Such records may also be reviewed by the site's EC and other regulatory bodies in Europe and in the United States, as detailed in the ICF.

11.7. Registry Discontinuation or Suspension

Gore may suspend or prematurely terminate the registry at either an individual site or at all participating sites for significant and documented reasons. Gore could consider terminating or suspending the participation of a particular clinical site or a specific investigator if Gore oversight identifies serious and / or repeated deviations from the protocol.

If, for any reason, Gore suspends or prematurely terminates the registry or an investigator at an individual clinical site, Gore will notify the applicable EC.

12. References

1. Xenos ES, Abedi NN, Davenport DL, Minion DJ, Hamdallah O, Sorial EE, et al. Meta-analysis of endovascular vs open repair for traumatic descending thoracic aortic rupture. J Vasc Surg. 2008;48(5):1343-51.
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