**AORTA Study Data Collection Tool**

Unique study ID # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Institution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Demographics:

Age (years): \_\_\_\_\_ Gender: \_\_\_\_\_\_\_\_\_\_ Height (inches) : \_\_\_\_\_\_\_\_\_\_\_\_\_ Weight (lbs.): \_\_\_\_\_\_\_\_\_\_\_\_\_

Known prior history of peripheral vascular disease? \_\_\_\_\_ Yes \_\_\_\_\_ No

Transfer from another facility? \_\_\_\_\_ Yes \_\_\_\_\_ No

**Injury data:**

**Injury Scores:**

Mechanism classification \_\_\_\_\_Penetrating **or** \_\_\_\_\_Blunt

Mechanism type (check **most** appropriate):

\_\_\_\_\_Gunshot wound \_\_\_\_\_Stab Wound

\_\_\_\_\_ Motor vehicle accident \_\_\_\_\_ Motorcycle accident

\_\_\_\_\_ Auto vs. pedestrian \_\_\_\_\_ Fall

\_\_\_\_\_ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ISS : \_\_\_\_\_\_\_\_\_

Head AIS: \_\_\_\_\_\_\_\_\_

Chest AIS: \_\_\_\_\_\_\_\_\_

Abdomen AIS: \_\_\_\_\_\_\_\_\_

**Field physiology / data (if known):**

First SBP: \_\_\_\_\_\_\_\_\_\_ First HR: \_\_\_\_\_\_\_\_\_ First GCS: \_\_\_\_\_\_\_\_\_

Prehospital CPR required? \_\_\_\_\_ Yes \_\_\_\_\_ No

Time from injury to hospital arrival (in minutes): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Admission physiology /data:**

SBP: \_\_\_\_\_\_\_\_\_\_ HR: \_\_\_\_\_\_\_\_\_ GCS: \_\_\_\_\_\_\_\_\_\_ Temperature (Celsius) \_\_\_\_\_\_\_\_\_\_

Presence of other signs of life? (Check all that apply)

\_\_\_\_\_ Pupillary response \_\_\_\_\_ Organized rhythm on monitor \_\_\_\_\_ Spontaneous movement

CPR in progress on arrival? \_\_\_\_\_ Yes \_\_\_\_\_ No

Total duration of CPR (Prehospital and hospital – in minutes): \_\_\_\_\_\_\_\_\_\_\_

Admission Labs:

Hgb: \_\_\_\_\_\_ mg/dL Hematorcrit (%): \_\_\_\_\_\_\_\_INR: \_\_\_\_\_\_ pH: \_\_\_\_\_\_\_\_ Base deficit +/- \_\_\_\_\_\_\_\_\_\_ Lactate: \_\_\_\_\_ mg/dL

**Aortic Occlusion (AO) initiation data:**

Who was the **PRIMARY** performer (**SENIOR** member directly involved in hands on conduct )? (check one)

Where did initial AO attempt take place? (check one): \_\_\_\_\_ ED \_\_\_\_\_ OR \_\_\_\_\_ IR

Type of AO initially attempted? (check one) \_\_\_\_\_ Open \_\_\_\_\_ Endovascular

Was active CPR ongoing during initial AO attempt? \_\_\_\_\_ Yes \_\_\_\_\_ No

Physiology at time AO procedure initiated:

SBP: \_\_\_\_\_\_\_\_\_\_ HR: \_\_\_\_\_\_\_\_\_ GCS: \_\_\_\_\_\_\_\_\_

\_\_\_\_\_ Trauma / Acute Care Surgery Attending \_\_\_\_\_ Trauma / Acute Care Surgery Fellow

\_\_\_\_\_ Vascular Surgery Attending \_\_\_\_\_ Vascular Surgery Fellow

\_\_\_\_\_ Interventional Radiology Attending \_\_\_\_\_ Interventional Radiology Fellow

\_\_\_\_\_ Surgery Resident (PGY \_\_\_\_\_\_\_) \_\_\_\_\_ Emergency Medicine Attending

\_\_\_\_\_ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**FOR OPEN AORTIC OCCLUSION ONLY:**

Type of approach utilized (check one):

\_\_\_\_\_ Anterolateral thoracotomy: \_\_\_\_\_ Clamshell Thoracotomy \_\_\_\_\_ Laparotomy

\_\_\_\_\_ Posterolateral Thoracotomy: \_\_\_\_\_ Median Sternotomy:

**FOR ENDOVASCULAR AORTIC OCCLUSION ONLY:**

Access Site (check one): \_\_\_\_\_ Femoral \_\_\_\_\_ Brachial / Axillary \_\_\_\_\_ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Side (check one): \_\_\_\_\_ Right \_\_\_\_\_ Left

Technique utilized to achieve arterial access (check one):

\_\_\_\_\_ Ultra-sound guided

\_\_\_\_\_ Fluoroscopic guided

\_\_\_\_\_ percutaneous using external landmarks and palpation

\_\_\_\_\_ Cut-down to facilitate direct visualization and access

Initial catheter diameter size (check one):

\_\_\_\_\_ 4 French \_\_\_\_\_ 5 French \_\_\_\_\_ Other: (\_\_\_\_\_ French)

Was initial catheter upsized? \_\_\_\_\_ Yes \_\_\_\_\_ No

Final catheter / sheath diameter utilized for balloon occlusion (check one):

\_\_\_\_\_ 11 French \_\_\_\_\_ 12 French \_\_\_\_\_ Other (\_\_\_\_\_ French)

Type of balloon AO device utilized (check one):

\_\_\_\_\_ Coda \_\_\_\_\_ Coda Stat \_\_\_\_\_ Reliant \_\_\_\_\_ Other (Write in: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

What imaging was utilized to facilitate positioning of balloon for AO (check one)?

\_\_\_\_\_ None, blind insertion using external landmarks only

\_\_\_\_\_ Ultrasound

\_\_\_\_\_ Plain film

\_\_\_\_\_ C-Arm fluoroscopy

\_\_\_\_\_ Formal Angiography suite

\_\_\_\_\_ Hybrid Operating or Resuscitation Room (THOR/ RAPTOR)

Where was balloon deployed (check one)?

\_\_\_\_\_ Zone 1 (origin of left subclavian artery to the celiac artery}

\_\_\_\_\_ Zone 2 (Celica artery to the lowest renal artery)

\_\_\_\_\_ Zone 3 (Lowest renal artery to the aortic bifurcation)

Was successful AO achieved? \_\_\_\_\_ Yes \_\_\_\_\_ No

Was balloon migration observed? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not applicable (blind inflation)

Was conversion to open AO required? \_\_\_\_\_ Yes \_\_\_\_\_ No

**Response to AO:**

Were hemodynamics improved with AO? \_\_\_\_\_ Yes \_\_\_\_\_ No

Was hemodynamic STABILITY (SBP consistently above 90 mm/Hg) with AO? \_\_\_\_\_ Yes \_\_\_\_\_ No Within **first 5 minutes** after AO, what was the physiologic response **(best values)?**

SBP \_\_\_\_\_\_\_\_\_\_ mm/Hg HR: \_\_\_\_\_\_\_\_\_\_\_ bpm GCS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Duration of initial AO (by balloon inflation or clamp time – in minutes): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mins

**WAS A SECOND AO ATTEMPT REQURED? \_\_\_\_ Yes \_\_\_\_ No**

**If “Yes”, was it (select one) \_\_\_\_Open or \_\_\_\_Endovascular**

**Response to AO (FOR SECOND ATTEMPT ONLY – IF REQUIRED)**

Were hemodynamics improved with AO? \_\_\_\_\_ Yes \_\_\_\_\_ No

Was hemodynamic STABILITY (SBP consistently above 90 mm/Hg) with AO? \_\_\_\_\_ Yes \_\_\_\_\_ No Within **first 5 minutes** after AO, what was the physiologic response **(best values)?**

SBP \_\_\_\_\_\_\_\_\_\_ mm/Hg HR: \_\_\_\_\_\_\_\_\_\_\_ bpm GCS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Duration of initial AO (by balloon inflation or clamp time – in minutes): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mins

**Timing of AO phases (ALL VALUES IN MINUTES FROM TIME OF HOSPITAL ADMISSION)**

Admission to **start** of FIRST AO procedure (arterial access for endovascular, skin incision for open):\_\_\_\_\_\_

Admission to **successful aortic occlusion** (by balloon inflation or clamp): \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Admission to **hemodynamic stability** (SBP>90 consistently, if achieved – blank if not) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Admission to **definitive hemorrhage control** (via IR, ex-fix or ex-lap/surgery) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Was an uncontrolled bleeding source ABOVE the aortic occlusion ultimately identified?**

**\_\_\_\_ Yes\_\_\_\_ No**

**What was the source of the predominant source of hemorrhage (select most appropriate):**

**\_\_\_\_ Arterial source \_\_\_\_\_ Venous source \_\_\_\_\_ Unclear**

**HOSPITAL COURSE / COMPLICATIONS / OUTCOMES**:

**Additional procedures required during 1st 24 hours of hospitalization (check all that apply):**

\_\_\_\_\_ Pelvic binder \_\_\_\_\_ Exploratory Laparotomy \_\_\_\_\_ Hepatic packing

\_\_\_\_\_ Pelvic packing \_\_\_\_\_ Hepatic resection \_\_\_\_\_ Splenectomy

\_\_\_\_\_ Bowel resection \_\_\_\_\_ Craniectomy / Craniotomy \_\_\_\_\_ Pelvic external fixation

\_\_\_\_\_ Embolization of the liver \_\_\_\_\_ Embolization of the spleen \_\_\_\_\_ Embolization of the pelvis

\_\_\_\_\_ Thoracotomy (for other intervention besides just AO) \_\_\_\_\_ Lung resection (lobectomy or greater)

**\_\_\_\_\_ Cardiac repair If yes, which location (select all that apply): \_\_\_\_ Left ventricle \_\_\_\_ Right Ventricle**

**\_\_\_\_\_ Left atrium \_\_\_\_\_ Right Atrium**

**Resuscitation requirements FIRST 24 HOURS:**

Packed red blood cells (units): \_\_\_\_\_\_\_\_\_\_

Fresh frozen plasma (units): \_\_\_\_\_\_\_\_\_\_

Platelets (total packs: i.e. one six pack = 6): \_\_\_\_\_\_\_\_\_\_

Cryoprecipitate (units): \_\_\_\_\_\_\_\_\_\_

Total crystalloids (liters) required 1st 24 hrs \_\_\_\_\_\_\_\_

Vasopressors required 1st 24 hours \_\_\_\_\_ Yes \_\_\_\_\_ No

Factor VIIa given? \_\_\_\_\_ Yes \_\_\_\_\_ No

Tranexamic acid (TXA) given? \_\_\_\_\_ Yes \_\_\_\_\_ No

**Lab values 1st 24 Hours**

Lowest Hgb: \_\_\_\_\_\_\_\_ mg/dL

Highest INR: \_\_\_\_\_\_\_\_\_

Lowest Base Deficit - / + \_\_\_\_\_\_\_\_\_

Lowest pH \_\_\_\_\_\_\_\_\_

Highest Lactate: \_\_\_\_\_\_\_\_\_ mg/dL

**Complications:**

**General Complications (check all that apply):**

**\_\_\_\_\_** Acute kidney injury requiring dialysis \_\_\_\_\_ Acute Kidney injury NOT requiring dialysis

\_\_\_\_\_ ALI or ARDS \_\_\_\_\_ Bacteremia \_\_\_\_\_ Pneumonia

\_\_\_\_\_ Sepsis or Septic Shock \_\_\_\_\_ Stroke / CVA \_\_\_\_\_ Paraplegia \_\_\_\_\_ Myocardial infarction

\_\_\_\_\_ Multi-organ dysfunction / MODS

\_\_\_\_\_ Neuro deficit secondary to spinal cord ischemia

**Local access site complications (RELATED TO ENDOVASCULAR AO ACCESS SITE ONLY)**

**(check all that apply):**

\_\_\_\_\_ Hematoma \_\_\_\_\_ Pseudoaneurysm

\_\_\_\_\_ Arteriovenous fistula \_\_\_\_\_ Extremity ischemia

\_\_\_\_\_ Stenosis \_\_\_\_\_ Distal embolism

\_\_\_\_\_ Infection requiring antibiotics only \_\_\_\_\_ Infection requiring surgical intervention

\_\_\_\_\_ Need for patch angioplasty \_\_\_\_\_ Need for arterial bypass

\_\_\_\_\_ Need for amputation

**Complications specific to AO via OPEN APPROACHES (check all that apply):**

\_\_\_\_\_ Retained hemothorax requiring operative evacuation via VATS or thoracotomy

\_\_\_\_\_ Empyema

\_\_\_\_\_ Local wound infection - requiring surgery

\_\_\_\_\_ Local wound infection - requiring antibiotics only

**\_\_\_\_\_** Wound dehiscence

**OUTCOMES:**

**(Note: For calculations below, admission day = Hospital day 1)**

Ventilator days: \_\_\_\_\_\_\_\_\_ Intensive Care Unit Length of Stay (days): \_\_\_\_\_\_\_\_\_

Hospital Length of Stay (days): \_\_\_\_\_\_\_\_\_ Discharge GCS: \_\_\_\_\_\_\_\_\_

**Discharge GOS:**  \_\_\_\_\_\_\_\_\_

**Discharge disposition (Select one): \_\_\_\_\_ Rehab / Nursing facility \_\_\_\_\_ Home \_\_\_\_\_ Mortality**

In-hospital mortality? \_\_\_\_\_ No \_\_\_\_\_ Yes (Mortality Hospital Day: \_\_\_\_\_\_\_\_\_\_)

If died first hospital day, how many hours after admission? \_\_\_\_\_\_\_\_\_ Hours

If in-hospital mortality occurred, where did it occur (select one):

\_\_\_\_ Emergency Room \_\_\_\_\_Operating room \_\_\_\_Intensive Care Unit

\_\_\_\_ Ward / Floor \_\_\_\_\_ Interventional Radiology