BMC2 Carotid Artery Stent (CAS) Worksheet

I. *Procedure Information for Vascular Intervention*

Physician _____ **Fellow ID/Second Operator** _____

Procedure Date _____ **Start Time** _____ **Procedure End Date** _____ **End Time** _____

Status of Procedure ○ Elective ○ Urgent ○ Emergent

II. *Labs Pre Procedure*

Pre Creatinine _____ mg/dl Not drawn

Pre Hemoglobin _____ g/dl Not drawn

Pre BNP _____pg/mL Not drawn

Pre Troponin Y / Not drawn

Pre Troponin I _____ No **I HS** _____ No

Pre Troponin T_____ No **T HS**_____ No

Units

- ng/dL
- ng/mL
- ng/L
- pg/mL

Pre COVID-19

- Positive
  - Date _____ Time _____ _____
  - Not Documented
- Negative
  - Date _____ Time _____ _____
  - Not Documented
- Investigating COVID-19
- COVID-19 Not Suspected
- Recovered COVID-19

III. *Labs Post Procedure*

Peak Creatinine _____ mg/dl Not drawn

Nadir Hemoglobin _____g/dl Not drawn

COVID-19

- Positive
  - Date _____ Time _____ _____
  - Not Documented
- Negative
  - Date _____ Time _____ _____
  - Not Documented
- No Result
- No Specimen
- No Change in COVID Status

IV. *Medication During Procedure*

Medication During Procedure	Pre	During	Post	C/I		Pre	During	Post
Aspirin	☐			☐	**Lactated Ringer's Infusion**			
Clopidogrel (Plavix)	☐	☐		☐	**LR <1 hr**	☐	☐	☐
Prasugrel (Effient)	☐	☐		☐	**LR 1-3 hrs**	☐	☐	☐
Ticagrelor (Brilinta)	☐	☐		☐	**LR 3-6 hrs**	☐	☐	☐
Atropine		☐		☐				
IV / IA Nitroglycerin		☐		☐	**LR >6 hrs**	☐	☐	☐
IV Heparin/Unfractionated Heparin	☐	☐	☐		**LR <1 hr**	☐	☐	☐
Protamine		☐	☐		**Other Hydration Infusion**			
Bivalirudin (Angiomax)		☐			**Other <1 hr**	☐	☐	☐
Thrombolytics (TPA /TNK /rPA)	☐	☐	☐		**Other 1-3 hrs**	☐	☐	☐
Sodium Bicarbonate	☐	☐	☐		**Other 3-6 hrs**	☐	☐	☐
Saline Infusion					**Other >6 hrs**	☐	☐	☐
Saline <1 hr	☐	☐	☐		**Saline >6 hrs**	☐	☐	☐
Saline 1-3 hrs	☐	☐	☐					
Saline 3-6 hrs	☐	☐	☐					

V. *Patient History*

Significant Valve Disease Y / N
- □ MI/MR
- □ MS
- □ AI
- □ AS

Mechanical Aortic or Mitral Valve Y / N

Angina CCS Class III or IV within 6 weeks Y / N

Peripheral Arterial Disease (PAD) Y / N

Home O2 Therapy Y / N

Major surgery planned within next 8 weeks
- Cardiac
- Vascular
- Other

Previous Neck Radiation Y / N

Previous Neck Surgery (other than CEA) Y / N

Tracheostomy Present Y / N

Previous Laryngeal Nerve Palsy Y / N
- Right
- Left

VI. *Cardiac History*

Two or More Major Coronary Arteries with Stenosis ≥70% (LAD, LCX, RCA) Y / N

Left Main Coronary Artery Stenosis ≥50% Y / N

MI within 6 weeks Y / N

NYHA Functional Class III or IV w/in 6 weeks Y / N

Permanent Pacemaker or ICD Y / N

Cardiac Stress Test Y / N
- Normal
- Abnormal

Electrocardiogram Y / N
- Normal
- Abnormal

VII. *Neurological History and Risk Factors*

Dementia or Alzheimer's Disease Y / N

Previous Carotid Intervention RT Y / N
- Previous Right CEA Timeframe Y/N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Previous Right CAS Timeframe Y/N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior

History of Seizure or Known Seizure Disorder Y / N

Previous Carotid Intervention LT
- Previous Left CEA Timeframe Y/N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Previous Left CAS Timeframe Y/N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior

Neurologic Event(s) prior to procedure Y / N
- TIA – Right Retinal Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- TIA – Left Retinal Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- TIA – Right Hemispheric Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- TIA – Left Hemispheric Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- TIA – Vertebrobasilar Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- TIA – Unknown Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Ischemic Stroke – Right Retinal Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Ischemic Stroke – Left Retinal Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Ischemic Stroke – Right Hemispheric Y /N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Ischemic Stroke – Left Hemispheric Y/ N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior

Ischemic Stroke – Vertebrobasilar Y /N
- ≤30 days prior
- 31-180 days prior
- ≥181 days prior

- Ischemic Stroke – Unknown Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Intracranial Hemorrhage or Hemorrhagic Stroke – Intraparenchymal Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Intracranial Hemorrhage or Hemorrhagic Stroke – Subarachnoid Y / N
  - ≤30 days prior
  - 31-180 days prior
  - ≥181 days prior
- Intracranial Hemorrhage or Hemorrhagic Stroke – Subdural Y / N
  - ≤30 days prior
  - 31-180 days prior

Acute Evolving Stroke Y/ N **Transient Monocular Blindness** Y / N ○ ≥181 days prior

VIII. Pre-Procedure Carotid Studies (within past 6 months)

Carotid Duplex Ultrasound (PRE) Y / N

Peak Systolic Velocity – Right (PRE)_____ cm/sec
- ○ Not documented

Peak Systolic Velocity – Left (PRE)_____ cm/sec
- ○ Not documented

End Diastolic Velocity – Right (PRE)_____ cm/sec
- ○ Not documented

End Diastolic Velocity – Left (PRE)_____ cm/sec
- ○ Not documented

ICA/CCA Ratio – Right_____ cm/sec
- ○ Not documented

ICA/CCA Ratio – Left_____ cm/sec
- ○ Not documented

CTA Angiography Performed Y / N

CTA CCA Highest % Stenosis – Right_____ %
- ○ Not documented

CTA CCA Highest % Stenosis – Left_____%
- ○ Not documented

CTA ICA Highest % Stenosis – Right_____ %
- ○ Not documented

CTA ICA Highest % Stenosis – Left_____%
Not documented

MRA Angiography Performed Y / N

MRA CCA Highest % Stenosis – Right_____ %
- ○ Not documented

MRA CCA Highest % Stenosis – Left_____%
- ○ Not documented

MRA ICA Highest % Stenosis – Right_____ %
- ○ Not documented

MRA ICA Highest % Stenosis – Left_____%
- ○ Not documented

Carotid Angiography Performed Y / N

Carotid Angio CCA Highest % Stenosis – Right_____ %
- ○ Not documented

Carotid Angio CCA Highest % Stenosis – Left_____%
- ○ Not documented

Carotid Angio ICA Highest % Stenosis – Right_____ %
- ○ Not documented

Carotid Angio ICA Highest % Stenosis – Left_____%
- ○ Not documented

IX. Procedure Details

Target Carotid Vessel
- ○ Right
- ○ Left

TCAR Y / N

Anesthesia
- ○ Local
- ○ General
- ○ MAC

XI. Procedure Indications and Anatomic Variables

Urgent Cardiac Surgery w/in 30 days Y / N

Concurrent with CABG Y / N

Target Lesion Symptomatic w/in Past 6 Months Y / N

Syncope Y / N

Restenosis in Target Vessel after Prior CAS Y / N

Restenosis in Target Vessel after Prior CEA Y / N

Contralateral Carotid Artery Occlusion Y / N

Fibromuscular Dysplasia of Carotid Artery Y / N

Spontaneous Carotid Artery Dissection Y / N

Pre-procedure smoking cessation Y / N
- □ Physician delivered advice
- □ NRT
- □ Referral to smoking counseling services

Lesion Difficult to Access Surgically Y / N
- ○ High Cervical
- ○ Low Intrathoracic

Aortic Arch Type
- ○ Type I
- ○ Type II
- ○ Type III
- ○ Unknown

Bovine Arch Y / N

Contrast Volume_____ mL
- ○ Not documented

Procedural Arterial Access Site
- ○ Femoral
- ○ Brachial/Radial/Axillary
- ○ Direct Carotid Puncture
- ○ Carotid Cutdown
- ○ Other

Vascular Closure Type
- □ Manual (No device)
- □ Perclose
- □ Angioseal
- □ Mynx
- □ Starclose
- □ Exoseal
- □ Surgical
- □ Celt

XI. Lesions and Devices

Target lesion Location
- Isolated CCA
- Isolated ICA
- Bifurcation

Visible Thrombus Present Y / N

Ulceration Y / N

Calcification
- None
- Mild to Moderate
- Dense to Concentric

Lesion Length (CAS)_____ mm
- Not documented

Pre Procedure % Stenosis_____ %

Second Lesion % Stenosis Y / N
- _____ %

Lesion Treatment Incomplete/Aborted Y / N
- ☐ Failure to gain vascular access
- ☐ Failure to confirm significant stenosis
- ☐ Unable to place guiding catheter/ sheath
- ☐ Unable to cross guidewire
- ☐ Unable to cross balloon
- ☐ Unable to deploy EPD
- ☐ Unable to deliver stent
- ☐ Unable to deploy stent
- ☐ Difficult to access due to tortuosity
- ☐ Hypotension
- ☐ Hypertension
- ☐ Arrhythmia
- ☐ Cardiac ischemia
- ☐ Other

Embolic Protection Attempted Y/N

Predilation Prior to Embolic Protection Device Deployment Y / N

Embolic Protection Successfully Deployed Y / N

Embolic Protection Manufacturer
- Abbott
- Boston Scientific
- Cordis
- EV3
- Gore
- Lumen Biomedical
- Medtronic
- Silk Road
- St Jude
- Other

Embolic Protection Model Name
- Accunet
- FilterWire
- Angioguard
- Spider
- Flow Reversal
- FiberNet
- GuardWire
- Proxis
- Emboshield
- Mo.Ma
- Enroute
- Other

Stents Implanted Y / N

Predilation Prior to Attempted Stent(s) Implant Y/ N

Stent Tapered Y/N

Stent Diameter Y / N
_____mm

Stent Length Y / N
_____mm

Malposition Y / N

Stent Manufacturer
_____

Stent Model Name
_____

Ballooning/Post Dilation Performed Y / N

Balloon Dia _____ mm
- Not Documented

Max. Inflation pressure _____ atm
- Not Documented

Final Min. Luminal Dia_____ mm
- Not Documented

Final % Stenosis_____%

XII ***Outcomes***

Vascular Access Complications Y / N
- □ Retroperitoneal hematoma
- □ Pseudo-aneurysm
- □ Hematoma at access site
- □ Bleeding at access site
- □ AV fistula
- □ Acute thrombosis
- □ Surgical repair of the vascular access site
- □ Other

Filter Spasm Y / N

Slow Flow Y/ N
- □ After stent deployment
- □ After post dilation
- □ Aspiration was performed
- □ Aspirate had visible debris
- □ Patient had neurological changes during slow flow

New Stroke Y / N

New Right Hemispheric/Retinal Neuro Event Occurred Y / N

New Right Hemispheric/Retinal Neuro Event Resolved Y / N

New Left Hemispheric/Retinal Neuro Event Occurred Y / N

New Left Hemispheric/Retinal Neuro Event Resolved Y / N

New Vertebrobasilar Event Occurred Y / N

New Vertebrobasilar Event Resolved Y / N

New Unknown Event Occurred Y/ N

New Unknown Event Resolved Y/ N

New TIA Y / N

New Right Hemispheric/Retinal Neuro Event Occurred Y / N

New Left Hemispheric/Retinal Neuro Event Occurred Y / N

New Vertebrobasilar Event Occurred Y / N

New Unknown Event Occurred Y / N

Death Y / N
- ○ During procedure
- ○ Post procedure

Cause of Death
- ○ Neurologic Due to a new or progressive neuro event
- ○ Cardiac Due to a fatal arrhythmia, MI or heart failure
- ○ Pulmonary Due to a pulmonary complication
- ○ Vascular D/T major blood loss or other vascular complication
- ○ Infection Due to infection
- ○ Renal Failure Due to renal failure
- ○ Other Due to other cause

Myocardial Injury Y / N

Date _____/_____/_____
- ○ Troponin leak
- ○ Demand ischemia
- ○ NSTEMI
- ○ STEMI
- ○ Not documented

Peak post-operative troponin value

Y / Not drawn
- ○ troponin I _____
- ○ troponin T _____
- ○ troponin I HS _____
- ○ troponin T HS _____

Units
- ○ ng/dL
- ○ ng/mL
- ○ ng/L
- ○ pg/mL