


## High Risk Features for TBAD and TEVAR: Did the AHA Guidelines Get Them Right?


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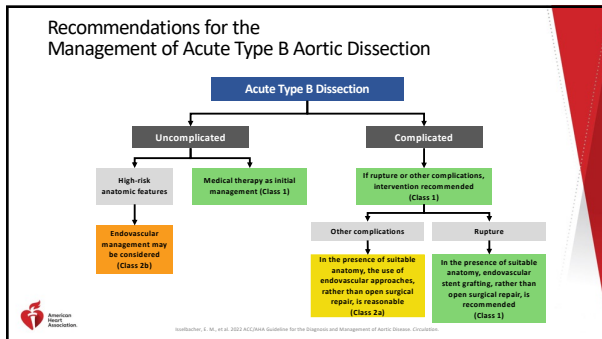
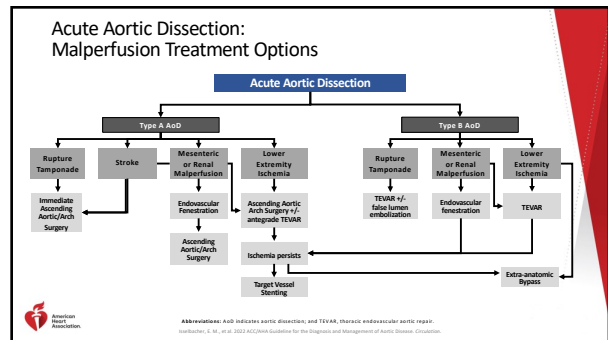
## DISCLOSURES

- None



## Highlights of the 2022 ACC/AHA Guideline for the Diagnosis and Management of Aortic Disease

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## High Risk Features in uTBAD

**Table 28. High-Risk Features in Uncomplicated Acute Type B Aortic Dissection\***

High-Risk Imaging Findings
Maximal aortic diameter >40 mm
False-lumen diameter >20–22 mm
Entry tear >10 mm
Entry tear on lesser curvature
Increase in total aortic diameter of 25 mm between serial imaging studies
Blood-flow-related findings
Imaging-only evidence of malperfusion
High-Risk Clinical Findings
Refractory hypertension despite ≥3 different classes of antihypertensive medications at maximal recommended or tolerated doses
Refractory pain persisting >12 h despite maximal recommended or tolerated doses
Need for readmission

- No Large RCTS in TBAD
  - INSTEAD
  - ADSORB
- Uncomplicated TBAD:
  - Medical therapy has 10% 30-day mortality
  - High risk features signal aortic events and mortality



### High Risk Features: The Evidence Basis <sup>9</sup>

- MGH: 254 medically managed TBAD
  - A: Entry tear >10mm
  - B: Aortic diameter (continuous)
  - C: Aortic diameter >40mm
  - D: False lumen diameter > 20mm
  - E: Free floating true lumen
  - F: >5mm growth
  - G: Completely thrombosed false lumen

*Patients with the features should be considered for elective TEVAR 14-90 days after TBAD*

Schwartz, JVS 2018

### High Risk Features Are Very Common

**Table 3. Predictors at baseline computed tomography angiography.**

Predictor*	No. (n = 65)	Mean measurement (n = 60)	No. (n = 140)	Mean measurement (n = 140)
>40 mm descending thoracic aortic diameter	25 (38.5)	39.6 ± 6.1	72 (51.4)	42.6 ± 7.9
FL diameter > 22 mm	19 (29.2)	16.5 ± 9.1	67 (47.9)	20.7 ± 9.0
Partial FL thrombosis	31 (47.7)	—	67 (47.9)	—
PET at the arch coronary	7 (10.8)	—	26 (18.6)	—
PET diameter > 10 mm	36 (55.4)	11.4 ± 6.9	84 (60.0)	11.9 ± 6.8
FI ≥ 0.64	12 (18.5)	0.598 ± 0.07	29 (20.7)	0.595 ± 0.09

\*Categorical data are n (N) and continuous data mean ± SD. FL = false lumen; PET = primary entry tear; FI = false lumen index.

- 140 uTBAD admitted in Heidelberg and Cologne.
- Mean 2.45 +/- 1.35 high risk features per patient
- 92% had at least one feature associated with aortic growth

Ante, M, EJEVS, 2018

### What About Timing?

- VQI : 1100 patients
- 811 had 1 HRF, 249 had 2 HRF, and 40 had 3 HRF
- TEVAR at > 15 days post TBAD was associated with improved survival (OR 0.38).
- Increasing HRF did not predict mortality
- HRF patients may benefit from a period of stabilization.

Potter HA, JVS, 2022

### SVS TBAD CPG 2.0 Concept?

Risk Profile	High Risk Features
<b>Severe</b>	Bloody Pleural Effusion Dissection related readmission Aortic Diameter >40 mm Refractory Pain
<b>Moderate</b>	Refractory Hypertension *Total True lumen collapse False Lumen Diameter >=22mm
<b>Mild</b>	Radiographic Malperfusion (clinically stable) * Entry Tear >10mm Entry tear on lesser Curvature

\* New feature

### SVS TBAD CPG 2.0 Concept?

Risk Profile	High Risk Features	Total Score	Points
<b>Severe</b>	Bloody Pleural Effusion	10.2	10
	Dissection related readmission	7.2	7
	Aortic Diameter >40 mm	6.7	7
	Refractory Pain	6.5	7
<b>Moderate</b>	Refractory Hypertension	4.5	5
	*Total True lumen collapse	4.4	4
	False Lumen Diameter >=22mm	4.1	4
<b>Mild</b>	Radiographic Malperfusion (clinically stable)	3	3
	* Entry Tear >10mm	1.9	2
	Entry tear on lesser Curvature	1.7	2

\* New feature

### Did AHA Guidelines Get it Right?

IMPROVE-AD  
IMPROving Outcomes in  
Vascular DisEase-Aortic Dissection

Thank you

