

A Point-of-Care TBI Bioassay Test

Is this a game changer?

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Disclosures

- None
- Not speaking for an organization

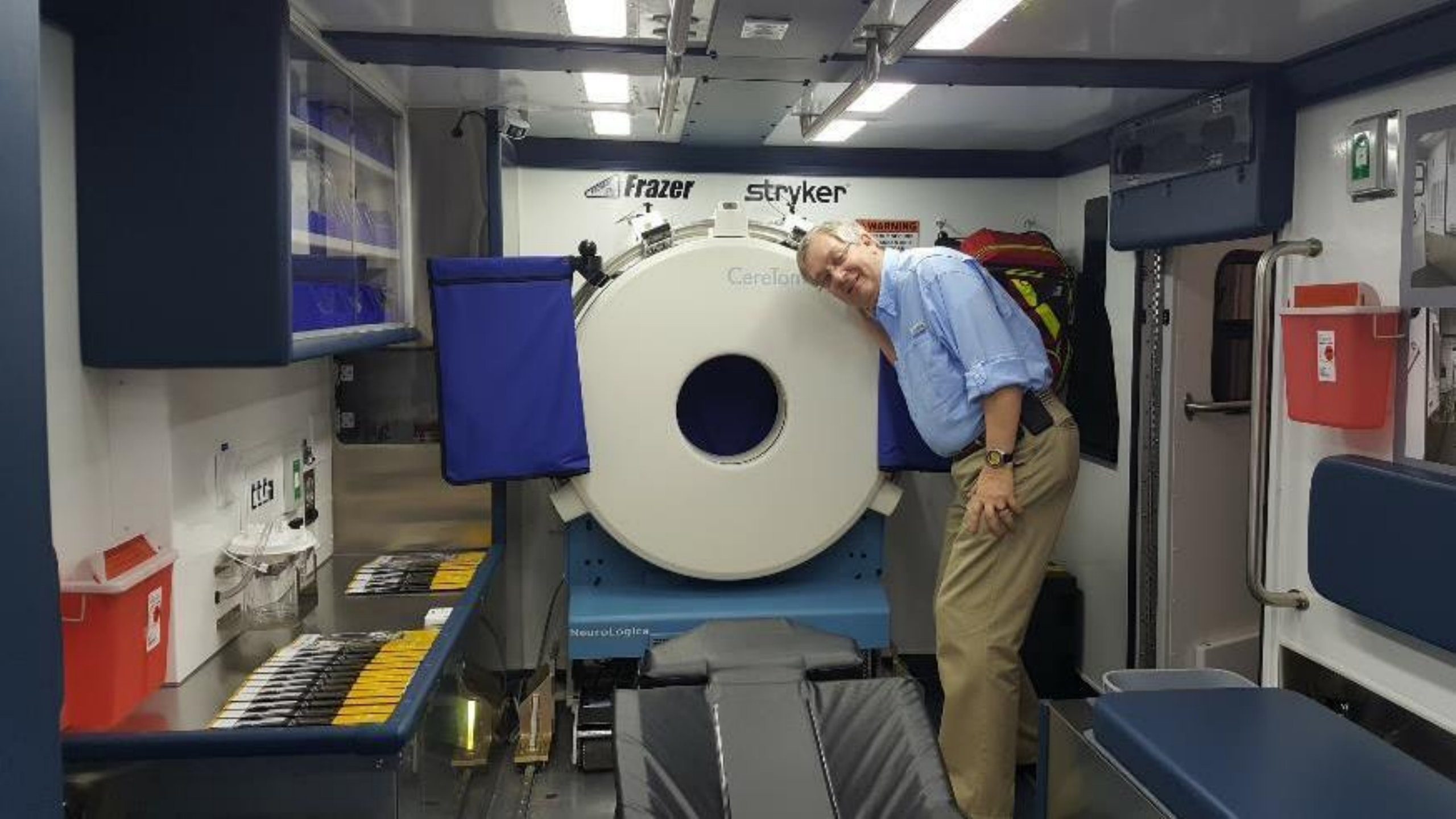


EMS Judgment

Consider risk factors, including:

- Low-level falls in young children (age \leq 5 years) or older adults (age \geq 65 years) with significant head impact
- Anticoagulant use
- Suspicion of child abuse
- Special, high-resource healthcare needs
- Pregnancy $>$ 20 weeks
- Burns in conjunction with trauma
- Children should be triaged preferentially to pediatric capable centers

If concerned, take to a trauma center



Frazer stryker

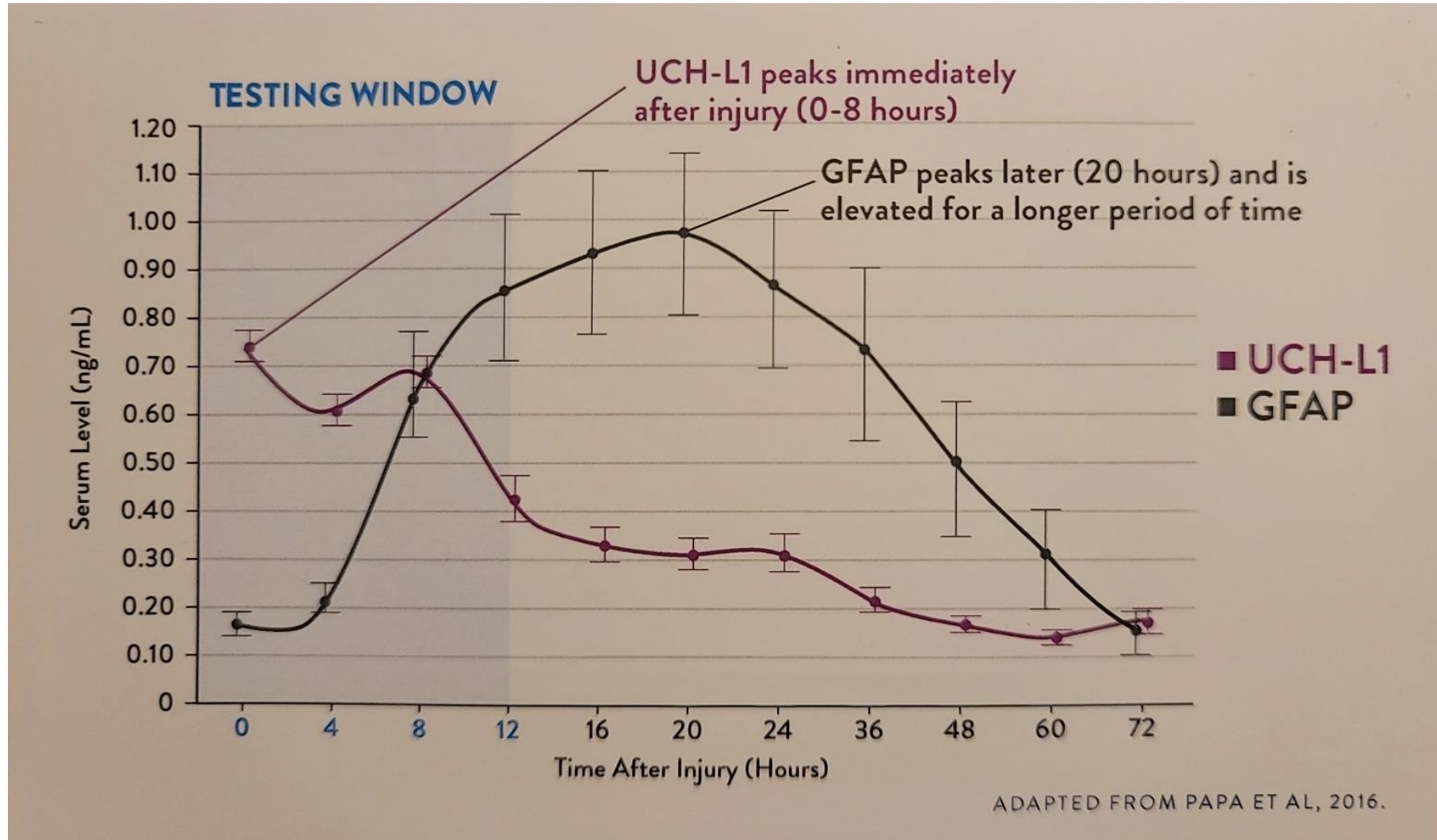
CereTom

NeuroLogica

Biomarkers released after brain injury

UCH-L1 = ubiquitin carboxy-terminal hydrolase L1

GFAP = glial fibrillary acidic protein



Alternative Approach (Futuristic)



TRACK-TBI NET

Transforming Research and Clinical Knowledge
in Traumatic Brain Injury Network



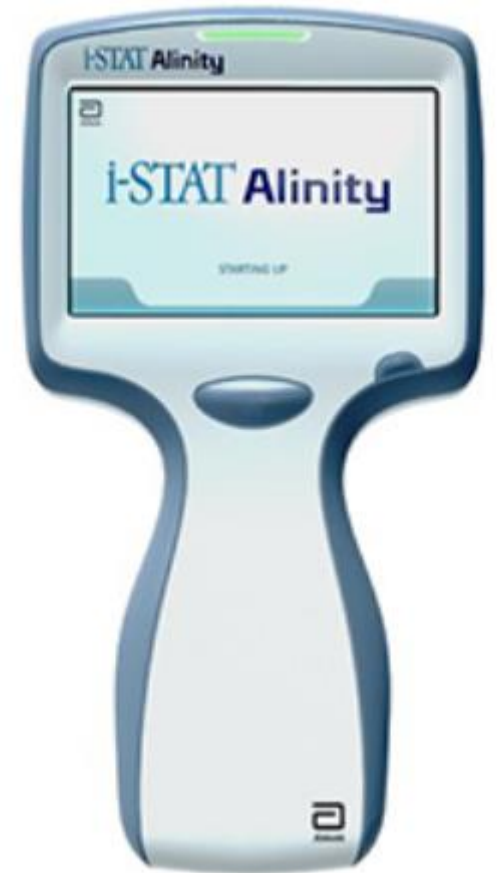
iStat TBI POC Assay

- for evaluation of mild TBI (GCS 13-15)
- > 18 y/o
- within 12 hours of injury
- requires plasma



BREAK THROUGH BARRIERS IN MILD TBI EVALUATION

RESULTS IN
≈15 MINUTES

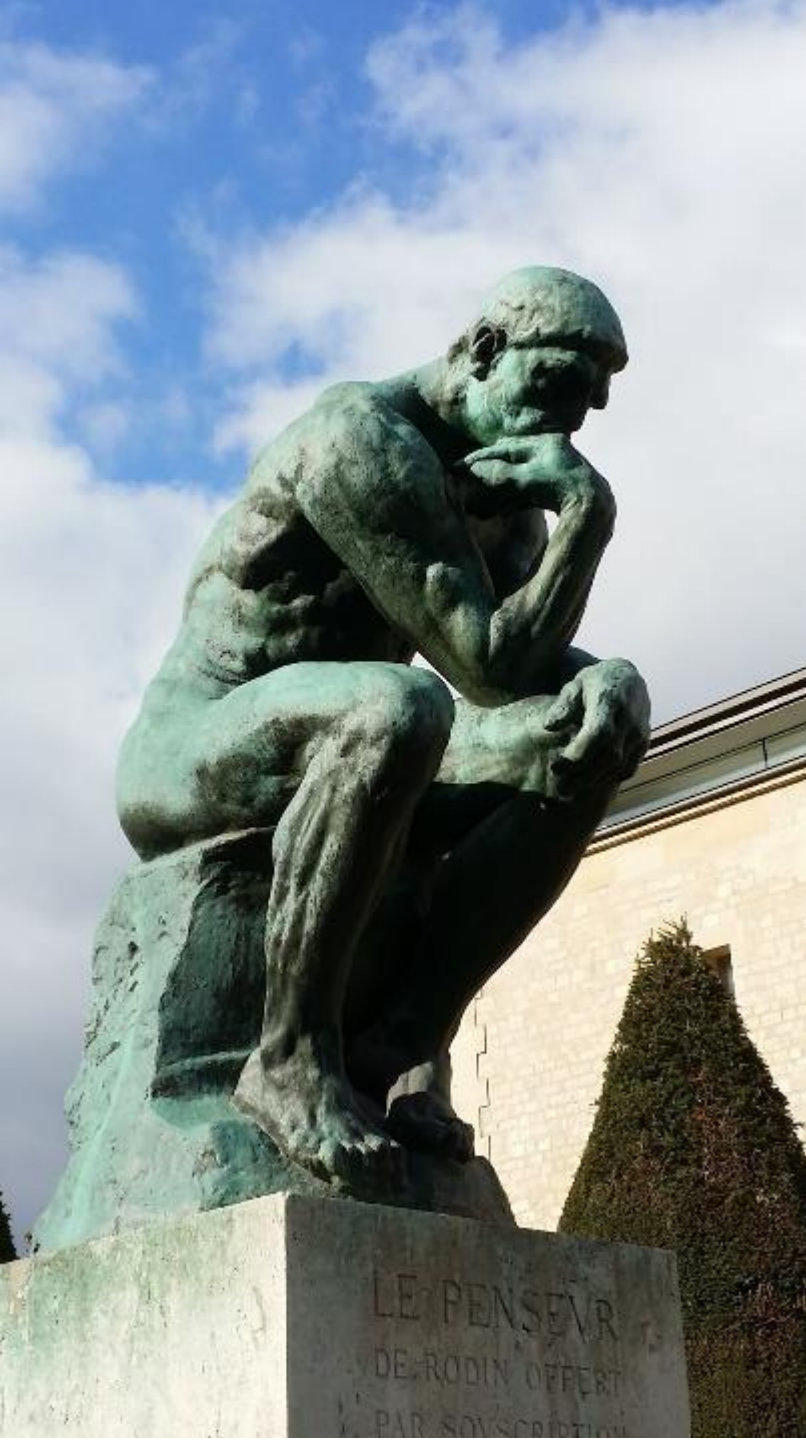


WWW.TBIBREAKTHROUGH.COM

- Bazarian, et al.
- Lancet Neurol. 2018
- 1,959 patients
- 125 ICH (6%)
- 8 NS (<1%)

[Biomarkers white page R12a.indd \(usacs.com\)](#)

- 66% had a positive test result and 34% were negative.
- The sensitivity for detecting intracranial injury was 97.6% (95% Confidence Interval [CI] 93.1%-99.5%).
- The specificity was 36.4% (95% CI 34.2% - 38.7%).
- The negative predictive value was 99.6% (95% CI 98.7%-99.9%), meaning there is <1% chance of a significant finding if the test is negative, and even lower for neurosurgical interventions.
- In 3 patients, the test was negative and the CT was positive.



Are Bioassays Good?

- D-dimer
- BNP
- Troponin

- Is mTBI different?

Summary

- Feb. 2024 NOW uses Blood instead of Plasma
- My WARNINGS
 - Use only in patients who we now transport for head CT
 - ? Wake Co. fall screen
 - ? Canadian CT rule
 - ? Consider goals of care
 - ? anticoagulation

