

Transient Ischemic Attack – A Golden Opportunity to Intervene

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- Ischemic stroke – persistent blockage of blood vessel
- **Transient ischemic attack** – temporary blockage of blood vessel
- Hemorrhagic stroke – rupture of blood vessel

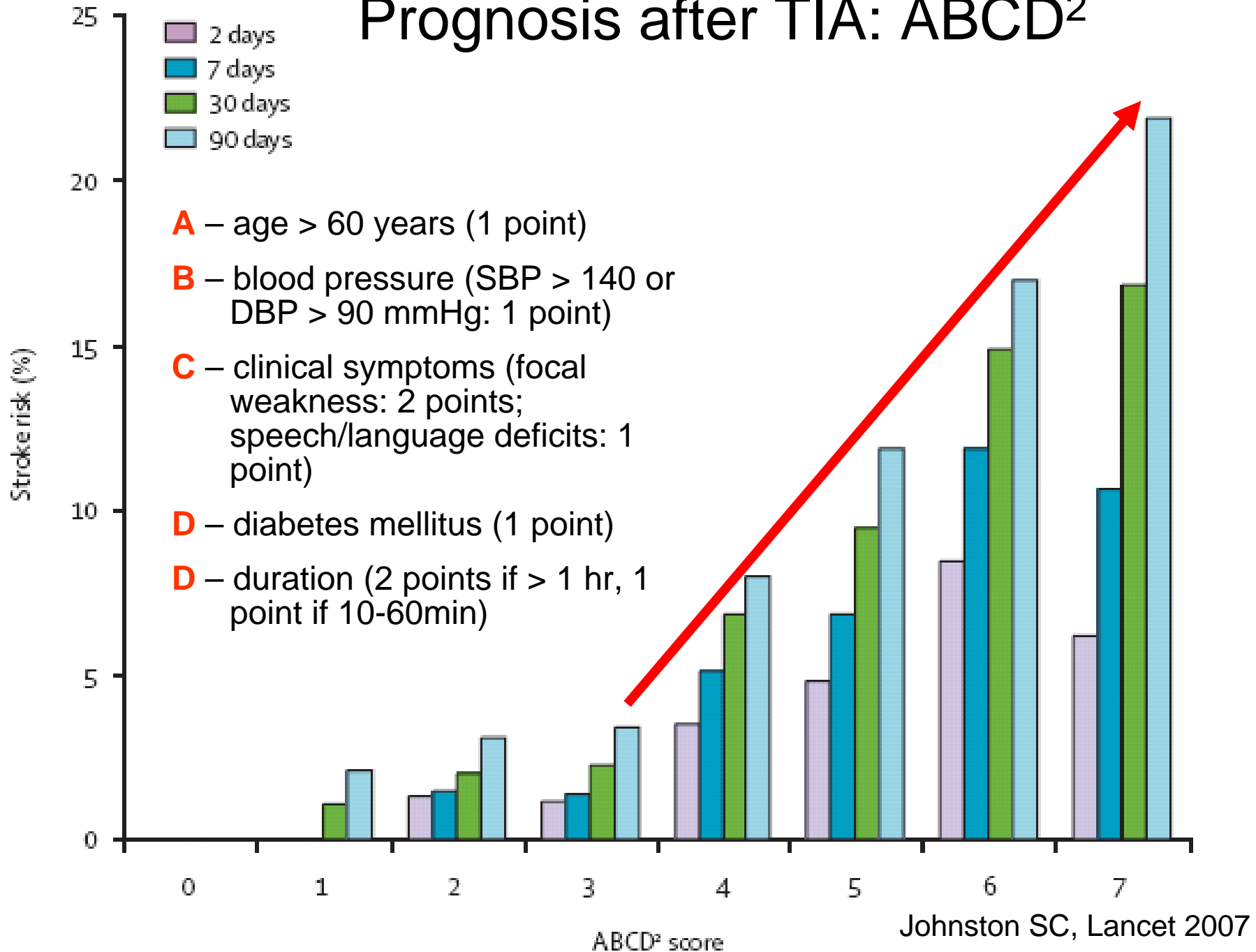
- More than 150,000 per year in the US
- Precedes stroke in 20% of patients usually within 1 week
- Risk factors are similar to stroke:
 - High blood pressure, irregular heart beat, diabetes, high cholesterol, and narrowed arteries in the neck
- TIA is a medical emergency and requires rapid and immediate medical attention

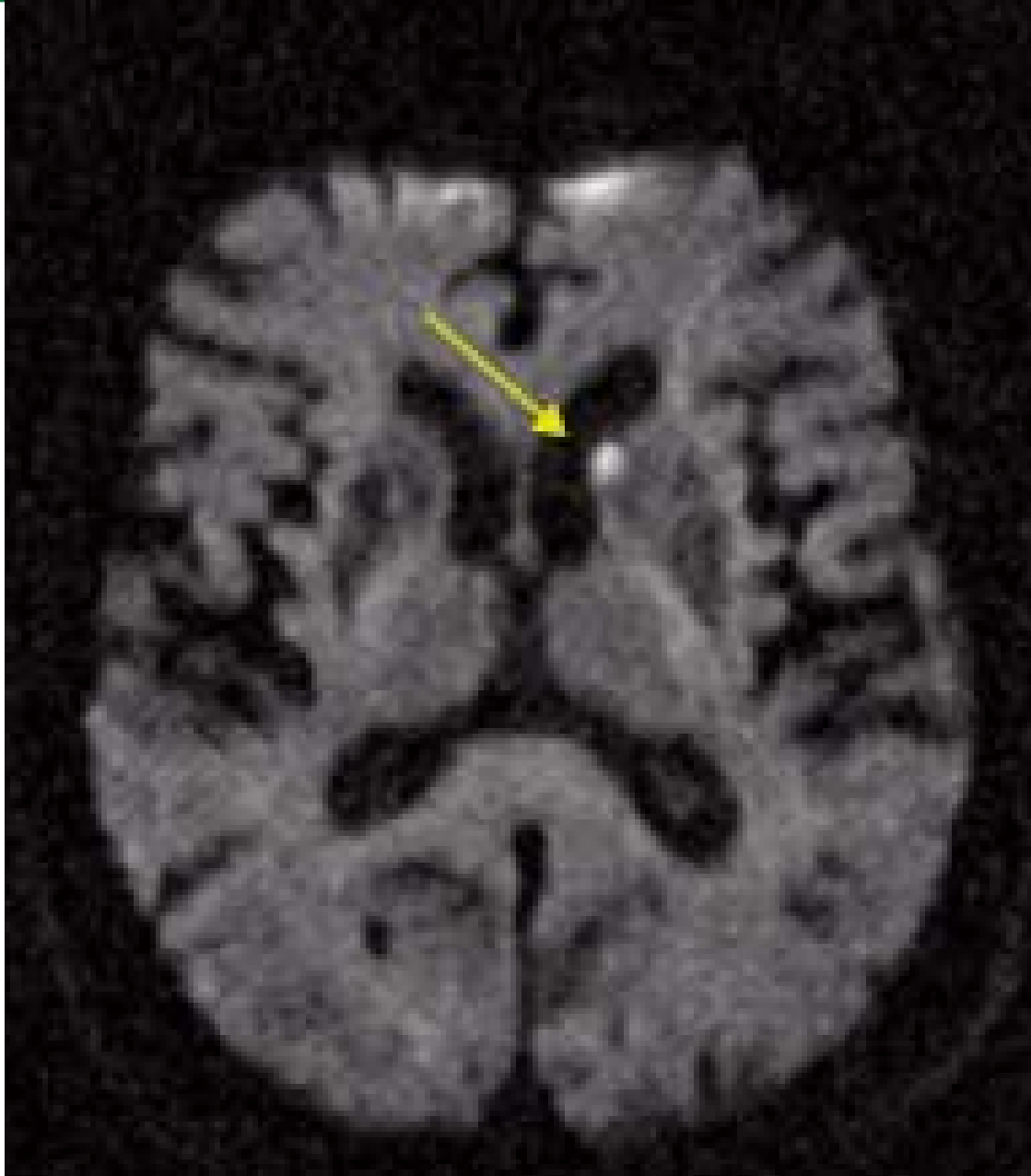
- Based on a telephone survey of over 10,000 US adults:
 - Less than 10% can identify even 1 TIA symptom or define it even vaguely
 - Of those with a diagnosis of TIA, only 64% of patients sought medical attention within 24 hours
- Recent study also found **45% delayed >1 day** to seek medical attention
 - Motor symptoms or duration greater than 1 hour predicted less delay
 - Occurrence on weekend predicted more delay

- Typical TIA symptoms
 - Weakness, clumsiness, or sensory changes in one or both limbs on the same side, speech or language disturbance, loss of vision in one eye or part of the eye, or visual field cut
 - Weakness or clumsiness (sometimes changing from one side to another), sensory alteration, complete blindness or visual field cut, or unsteady gait
 - Any two or more of the following: double vision, slurred speech, or vertigo

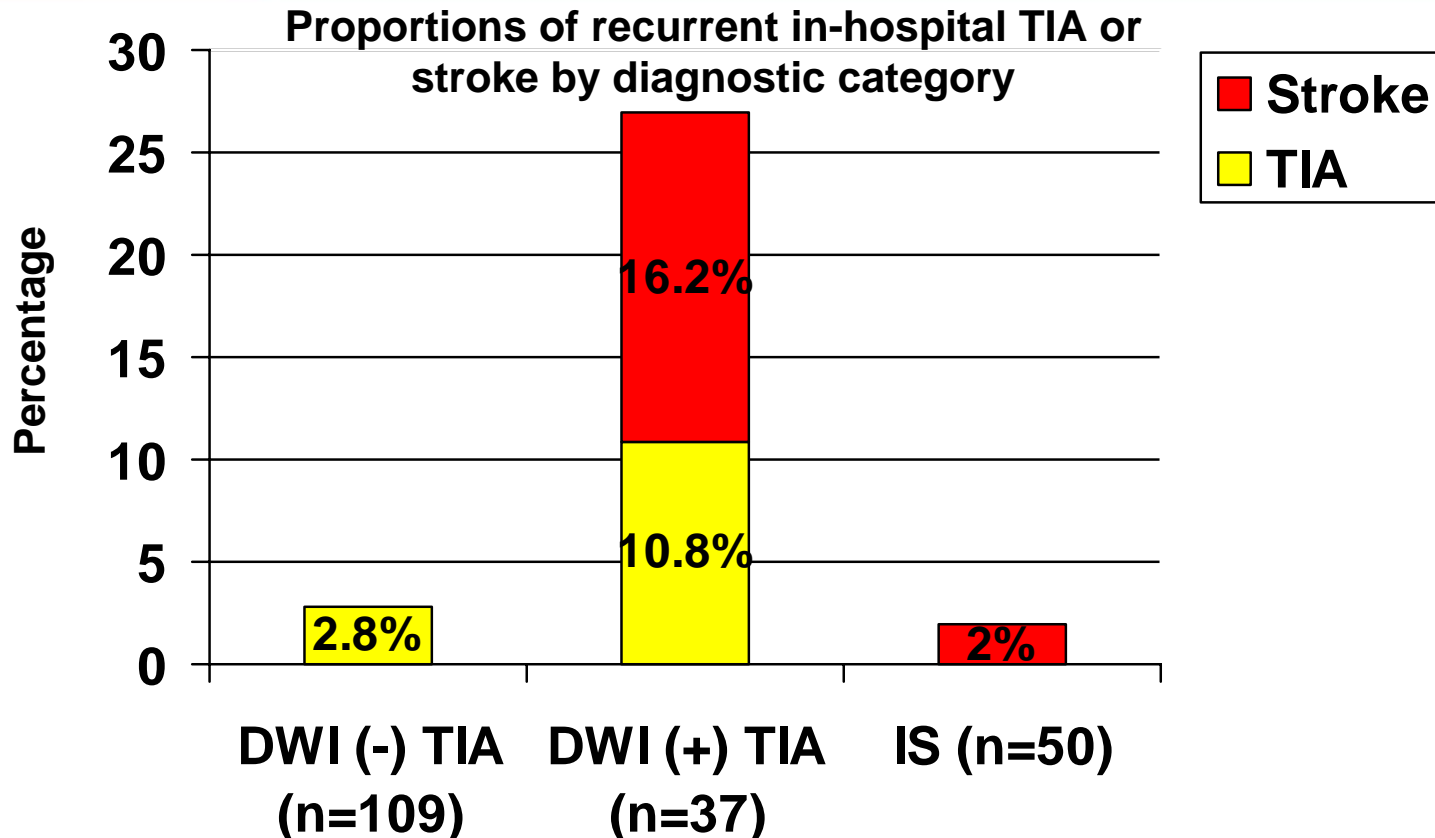
- Most TIAs last minutes to few hours (not 24 hours)
 - 50% recovered in < 30 minutes
 - 9.7% within 30-60 minutes
 - 15.2% within 60-180 minutes
 - 90% recovered within 240 minutes (4 hours)

Prognosis after TIA: ABCD²



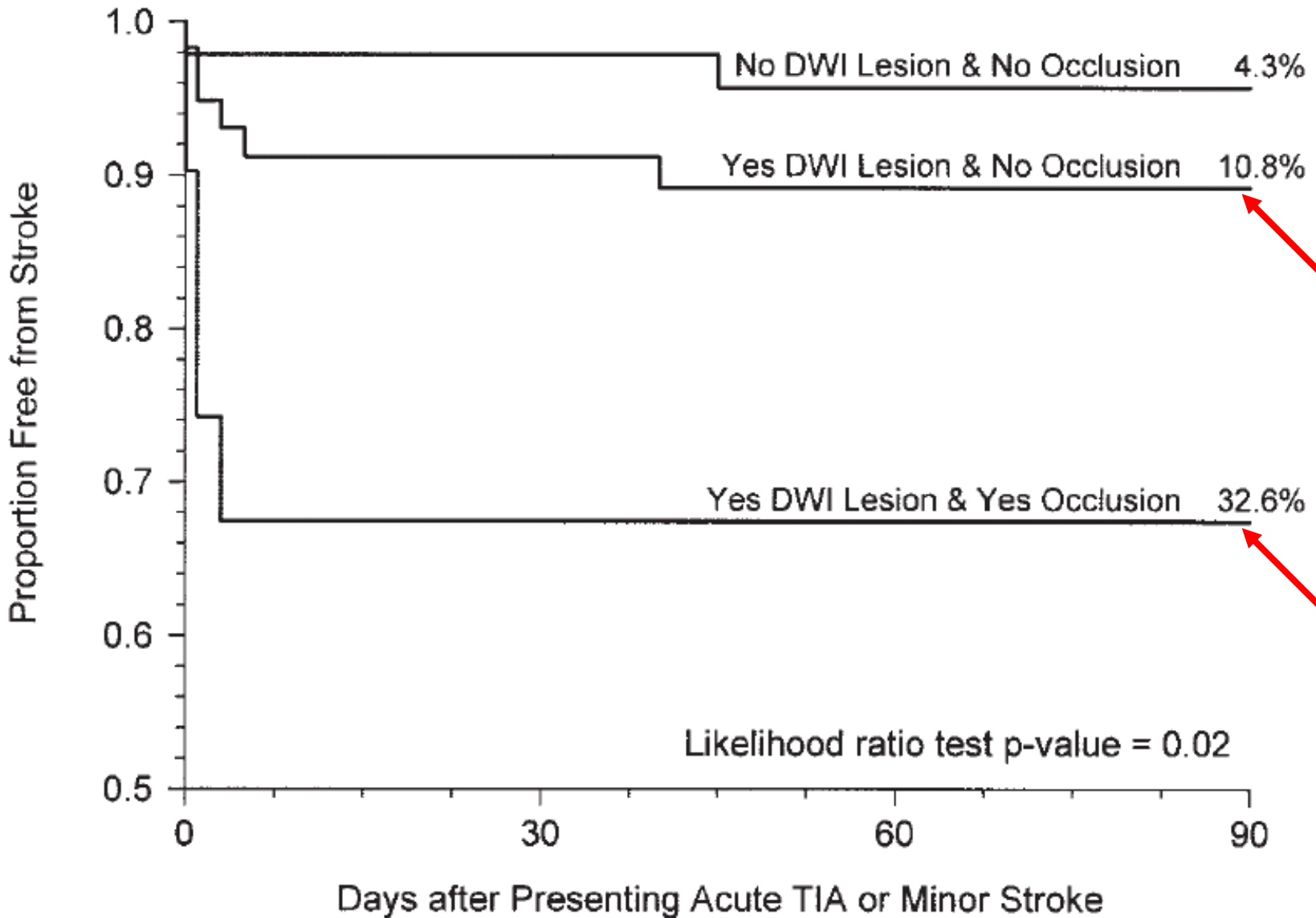


DWI (+) TIA and short-term risk



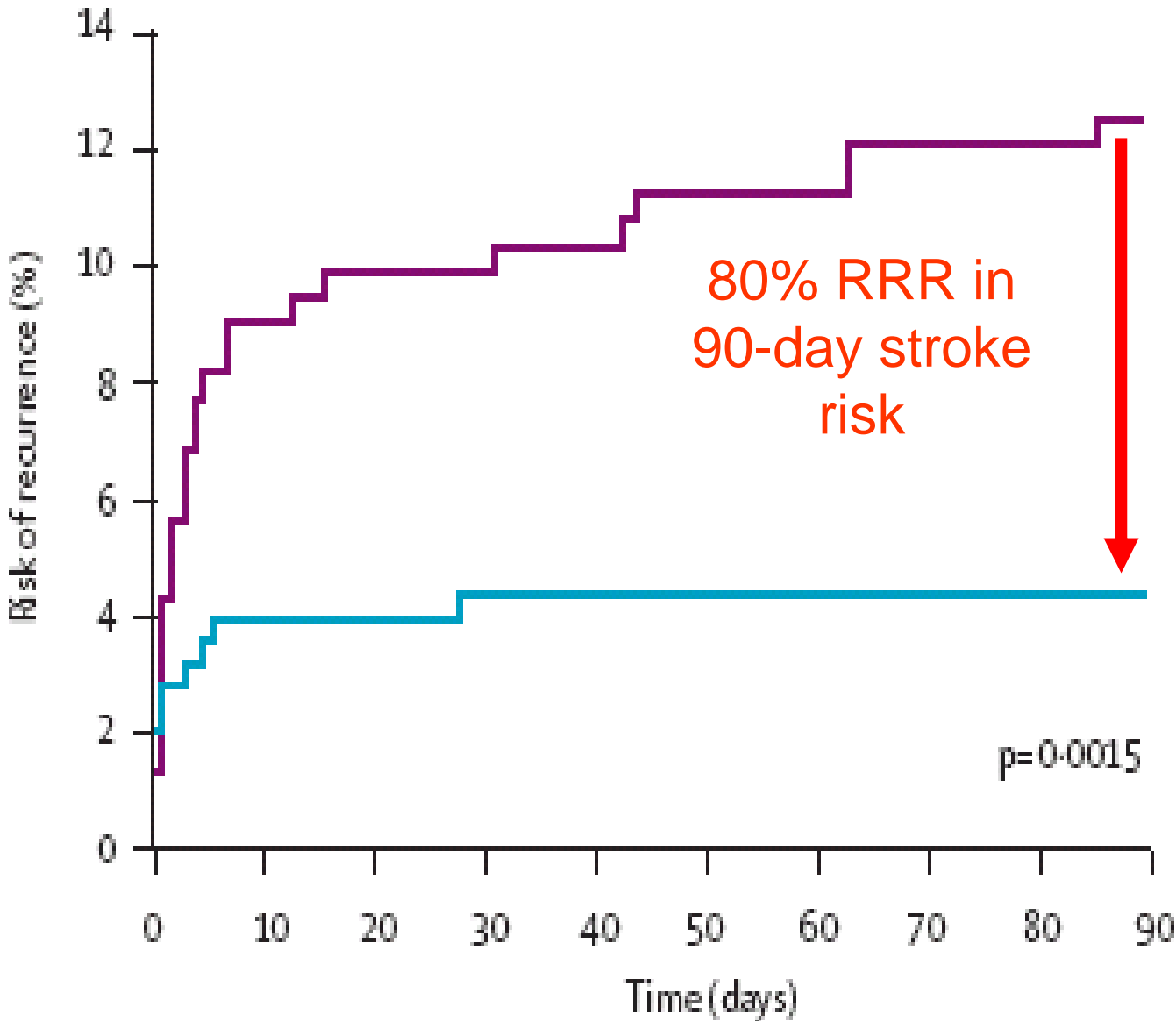
Diagnosis	Adj. OR	95% CI	p-value
DWI (-) TIA	1.0 (ref)	---	---
DWI (+) TIA	11.2	1.7-72.4	0.01
IS	0.8	0.1-10.9	0.86

DWI (+) TIA and long-term risk



Coutts SB, Ann Neurol 2005

EXPRESS Study



Phase 1: routine care (delayed evaluation)

Phase 2: same day evaluation

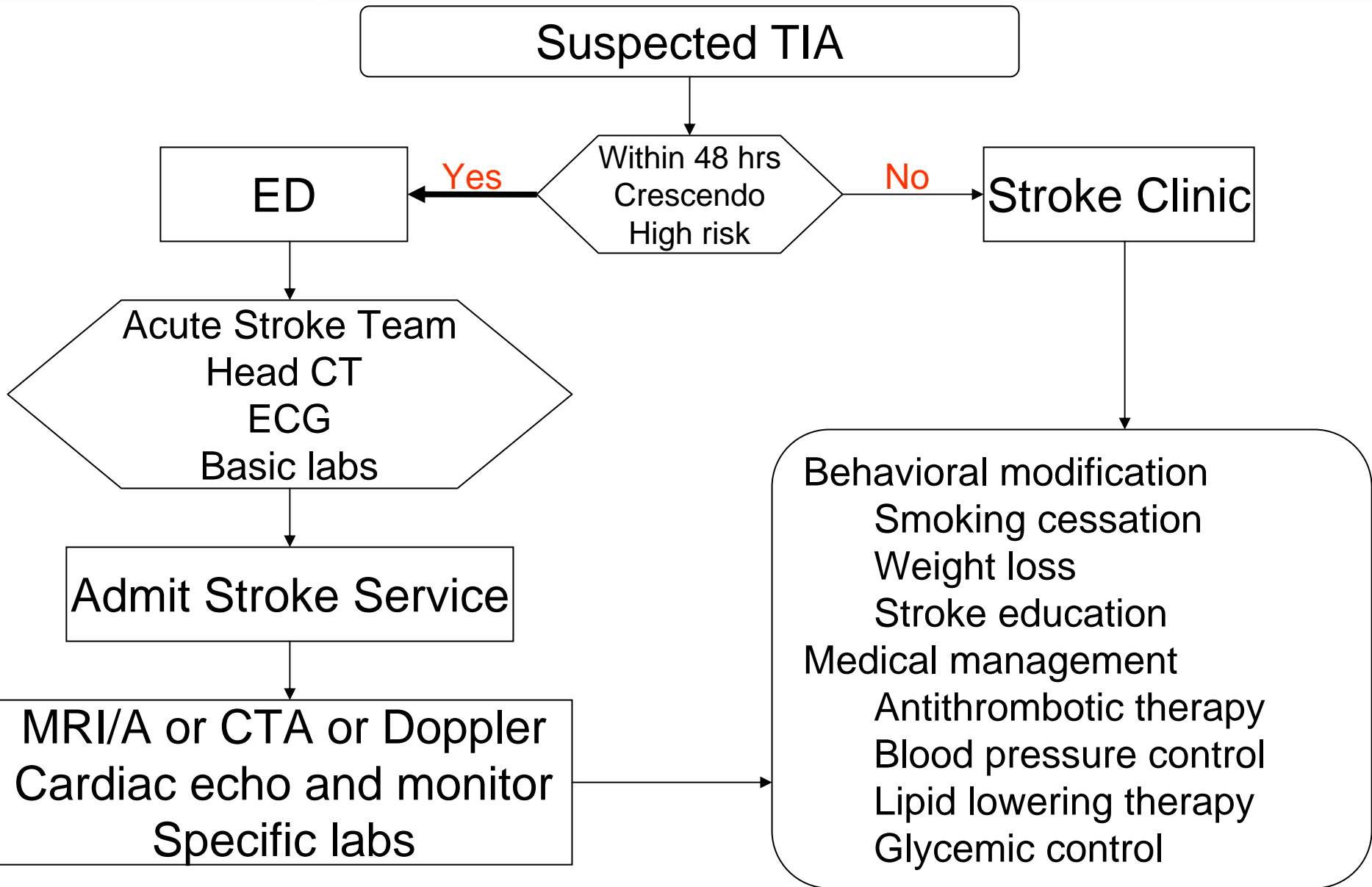
Rothwell PM, Lancet 2007

- Acute hospitalization is recommended for:

Timeframe	Patients should go to
Within 48 hours of 1st TIA	Emergency department
Multiple recurrent TIAs (crescendo) within past 7 days	Emergency department
Within 7 days of 1st TIA if: >1 hour duration ABCD ² score > 3 High-risk co-morbidity Carotid stenosis Atrial fibrillation	Emergency department

- Hospitalization is recommended
 - 48-hr risk of stroke is 5% (1 in 20 on average)
 - Rapidly rule-out high-risk causes (stenosis or cardiac embolism)
 - Potential for time-sensitive and highly efficacious treatments
 - Clot busters (TPA) if stroke in-hospital
 - Blood thinners (Coumadin) for atrial fibrillation
 - Early surgery for carotid narrowing (CEA)
 - Risk factor modification and initiation of treatments for blood pressure, cholesterol, etc.
 - An opportunity for stroke education

Rush TIA Express Service



- 15-20% of stroke patients have a TIA prior to the stroke, usually within a week
 - TIA is a warning sign of a pending stroke
 - Analogous to an earthquake, TIA is a major warning sign of a major stroke
- Symptoms of a TIA and stroke are short-lived (usually less than an hour)
- 5% of TIA patients will have a stroke within 48 hours of the TIA and 11% within 3 months

TIA is an emergency and a golden opportunity to intervene to prevent stroke

**THANK YOU FOR YOUR
ATTENTION!**