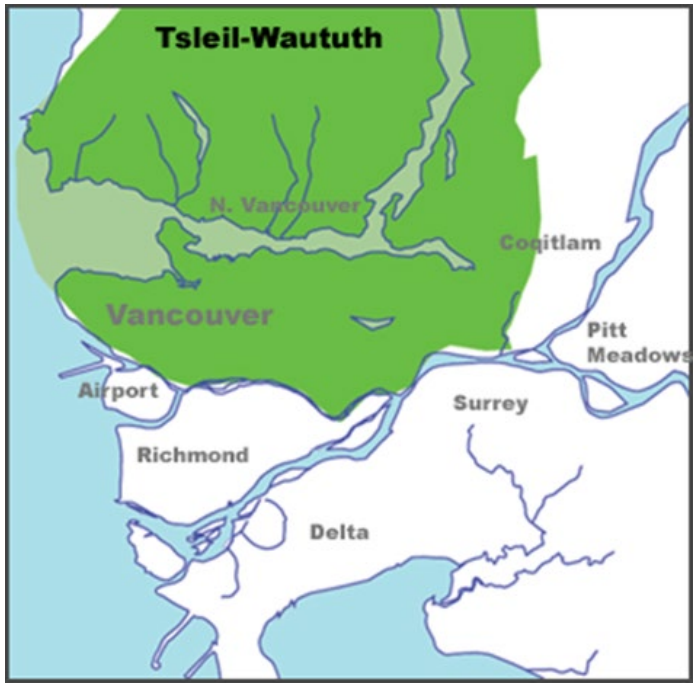
We would like to acknowledge that we are gathered today on the traditional territories of the Musqueam, Squamish and Tsleil-Waututh peoples.

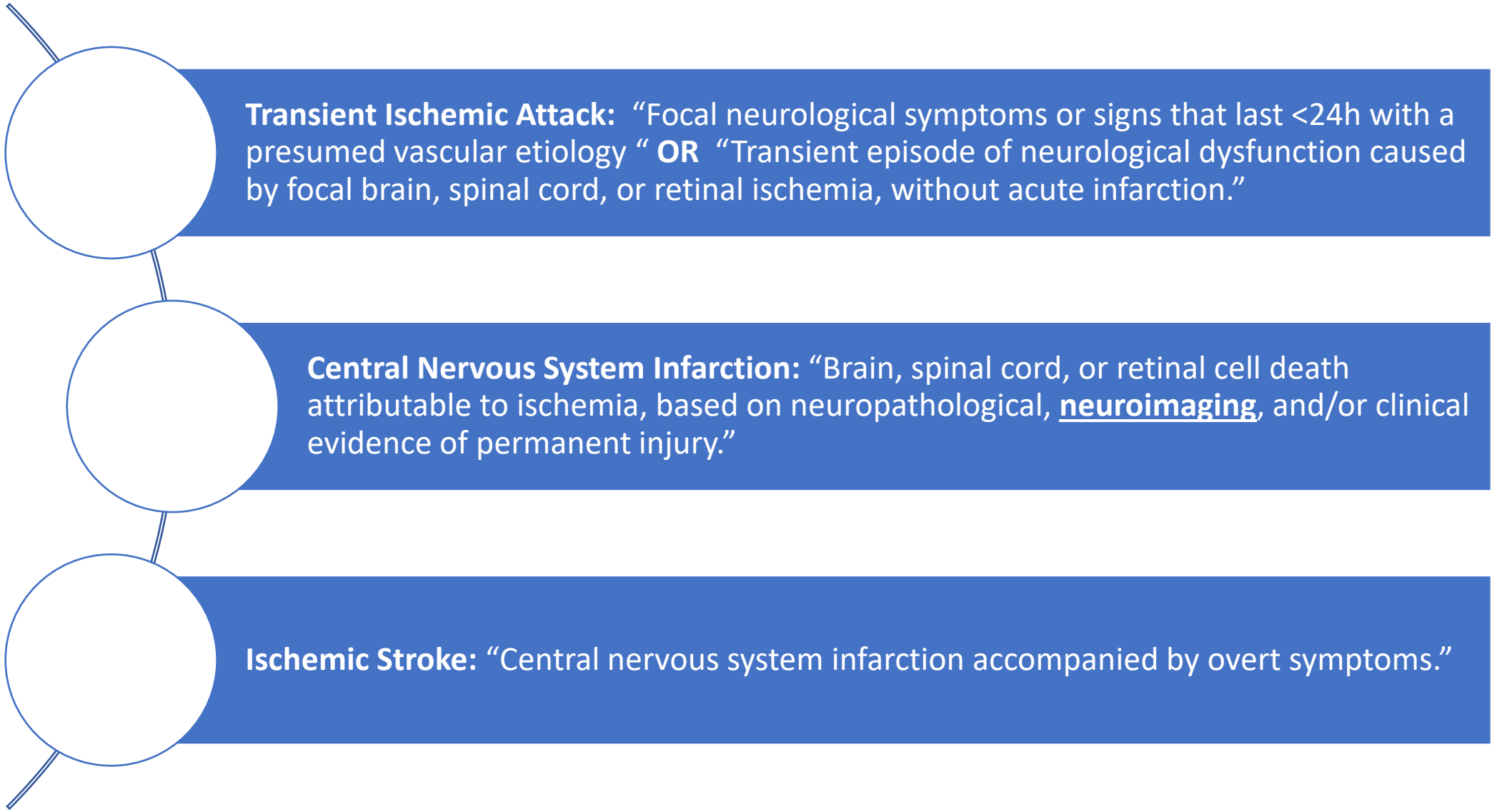
Source: www.johomaps.net/na/canada/bc/vancouver/firstnations/firstnations.html



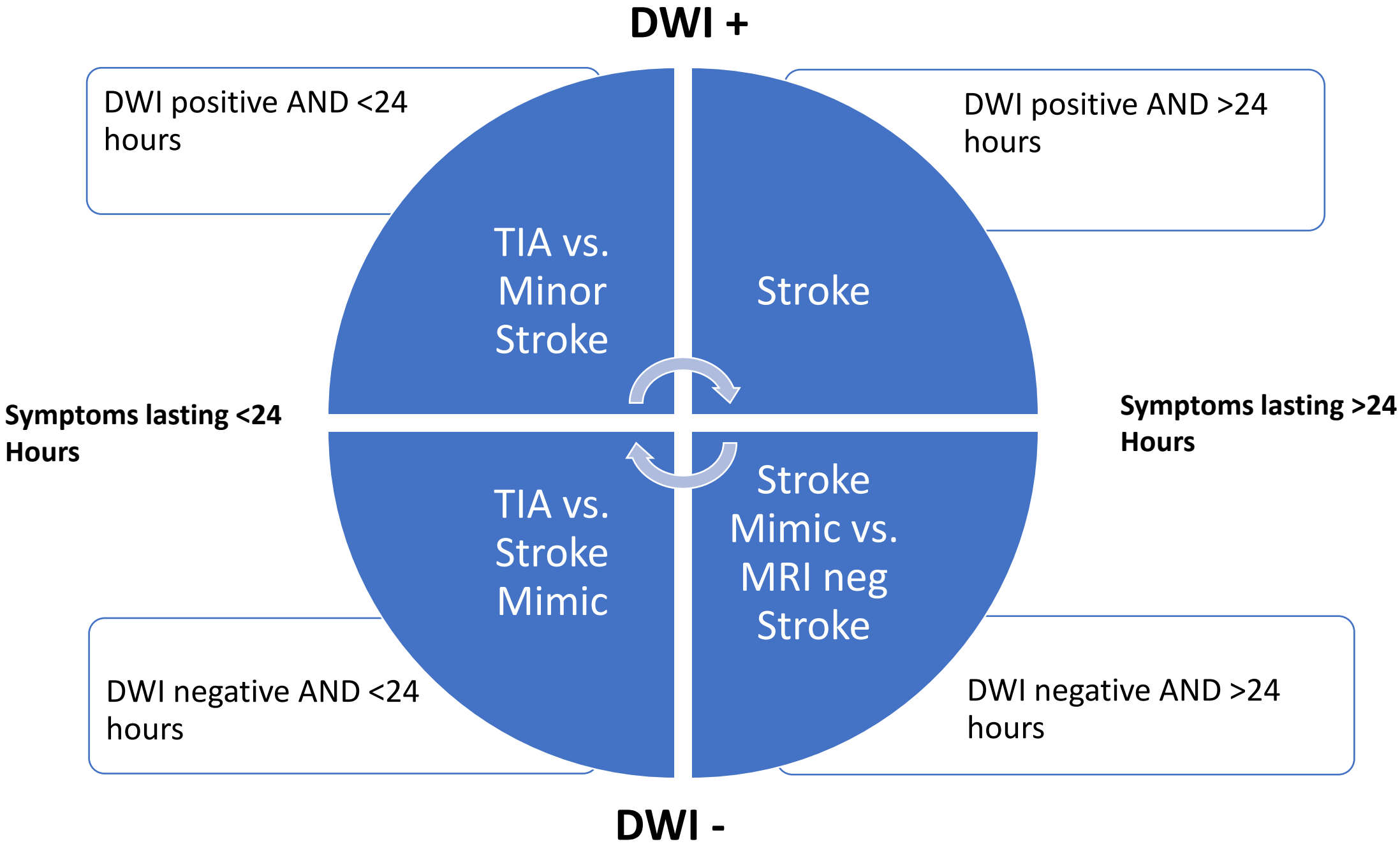
Stroke Prevention

(focusing on after TIA and Minor Stroke)

VCH Family Practice Rounds
Feb 12, 2025
Lily Zhou, MD, MS, FRCPC



Easton JD, Saver JL, Albers GW, et al. Definition and evaluation of transient ischemic attack: a scientific statement for healthcare professionals from the American Heart Association/American Stroke Association Stroke Council; Council on Cardiovascular Surgery and Anesthesia; Council on Cardiovascular Radiology and Intervention; Council on Cardiovascular Nursing; and the Interdisciplinary Council on Peripheral Vascular Disease. The American Academy of Neurology affirms the value of this statement as an educational tool for neurologists. *Stroke*. 2009;40:2276-2293.


DWI +
DWI positive AND <24 hours
DWI positive AND >24 hours
TIA vs. Minor Stroke
Stroke
Symptoms lasting <24 Hours
Symptoms lasting >24 Hours
TIA vs. Stroke Mimic
Stroke Mimic vs. MRI neg Stroke
DWI negative AND <24 hours
DWI negative AND >24 hours
DWI -

New Zealanders who emigrate to Australia raise the IQ of both countries.

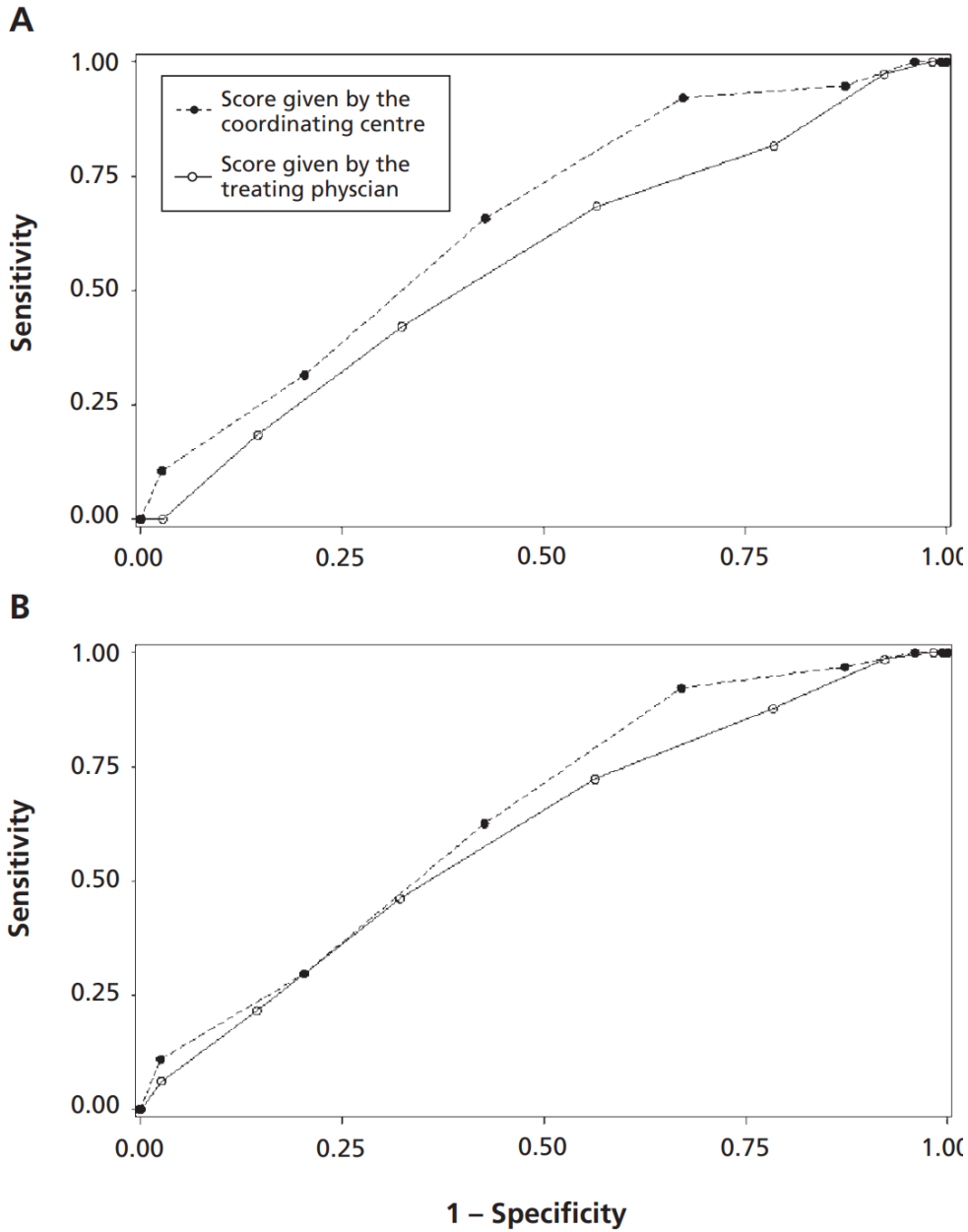
(Robert Muldoon)

Criteria	Value	Points
Age ≥ 60 years	Y/N	+1
BP ≥ 140/90 mmHg	Y/N	+1
Clinical features of the TIA	Unilateral Weakness	+2
	Speech disturbance without weakness	+1
	Other symptoms	0
Duration of symptoms	< 10 minutes	0
	10-59 minutes	+1
	≥ 60 minutes	+2
History of diabetes	Y/N	+1

Table 4: Performance of stratified, standardized, ABCD2 scores as a predictor of stroke at 7 and 90 days among 2032 patients with transient ischemic attack

ABCD2 threshold for high risk	Stroke at 7 d *n = 38*		Stroke at 90 d *n = 65*	
	Sensitivity, % (95%CI)	Specificity, % (95%CI)	Sensitivity, % (95%CI)	Specificity, % (95%CI)
> 0	100.0 (90.8–100)	0.7 (0.4–1.1)	100.0 (94.4–100)	0.7 (0.4–1.1)
> 1	100.0 (90.8–100)	4.0 (3.2–4.9)	100.0 (94.4–100)	4.0 (3.1–5.0)
> 2*	94.7 (82.7–98.5)	12.5 (11.2–14.1)	96.9 (89.3–99.1)	12.7 (11.3–14.3)
> 3	92.1 (79.2–97.3)	32.7 (30.6–34.7)	92.3 (83.2–96.8)	33.0 (30.9–35.1)
> 4	65.8 (49.9–78.8)	57.2 (55.0–59.3)	63.1 (50.9–73.8)	57.4 (55.2–59.6)
> 5†	31.6 (19.1–47.5)	86.9 (85.3–88.3)	29.2 (19.6–41.2)	79.7 (77.9–81.4)
> 6	10.5 (4.2–24.1)	97.3 (96.5–97.9)	10.8 (53.2–20.6)	97.4 (96.6–98.0)

Note: CI = confidence interval.
*Threshold for defining high risk as recommended by the American Heart Association.
†Threshold for defining high risk as recommended in the original publication of the ABCD2 score.



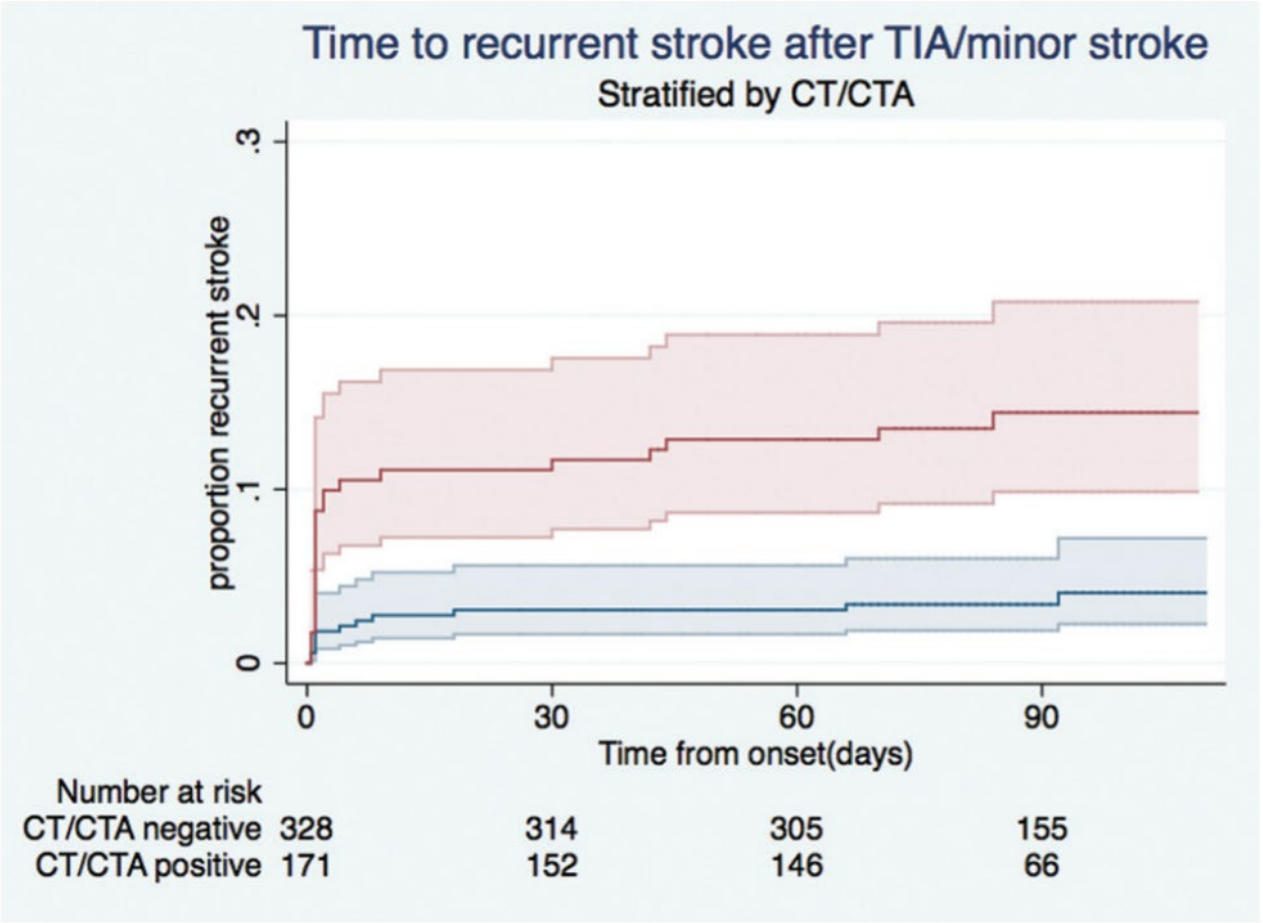
Perry JJ, Sharma M, Sivilotti MLA, et al. Prospective validation of the ABCD2 score for patients in the emergency department with transient ischemic attack. *Canadian Medical Association journal (CMAJ)*. 2011;183:1137-1145.

Table 3. Ischemic Strokes at 7 Days and 3 Months According to the ABCD² Score, Positive DWI Result, and LAA Etiology

ABCD² Score, n (%)	DWI, n (%)	No. of Strokes		LAA, n (%)	No. of Strokes	
		7 Days	3 Months		7 Days	3 Months
>5, 30 (9)	Positive, 21 (70)	3	4	Yes, 7 (23)	2	2
	Negative, 9 (30)	0	0	No, 23 (77)	1	2
4–5, 171 (50)	Positive, 69 (40)	2	5	Yes, 33 (19)	0	2
	Negative, 102 (60)	0	0	No, 138 (81)	2	3
<4, 138 (41)	Positive, 46 (33)	0	0	Yes, 20 (14)	0	1
	Negative, 93 (77)	0	1	No, 118 (86)	0	0

	No. at Risk	7 Days			3 Months			Crude HR (95% CI)
		No. of Strokes	Absolute Risk, % (95% CI)	*P**	No. of Strokes	Absolute Risk, % (CI 95%)	*P**	
ABCD² score								
<4	139	0	0	<0.0001	1	0.7 (0–2.1)	0.001	1
4–5	173	2	1.2 (0–2.8)		5	2.9 (0.4–5.5)		4.1 (0.5–34.8)
>5	31	3	9.7 (0–20.1)		4	13.0 (1.0–25.0)		19.1 (2.1–171.1)
DWI								
Negative	203	0	0	0.006	1	0.5 (0–1.5)	0.001	1
Positive	136	5	3.7 (0.6–5.8)		9	6.6 (2.5–10.7)		13.7 (1.7–105.4)
LAA								
No	283	3	1.1 (0–2.3)	0.179	5	1.8 (0.2–3.4)	0.006	1
Yes	60	2	3.4 (0–8.1)		5	8.4 (1.4–15.5)		4.9 (1.4–16.8)
AF								
No	316	4	1.3 (0.1–2.5)	0.308	9	2.9 (1.1–4.7)	0.790	1
Yes	27	1	3.7 (0–10.8)		1	3.7 (0–10.8)		1.3 (0.2–10.4)

Calvet D, Touzé E, Oppenheim C, Turc G, Meder J, Mas J. DWI lesions and TIA etiology improve the prediction of stroke after TIA. *Stroke*. 2009;40:187-192.



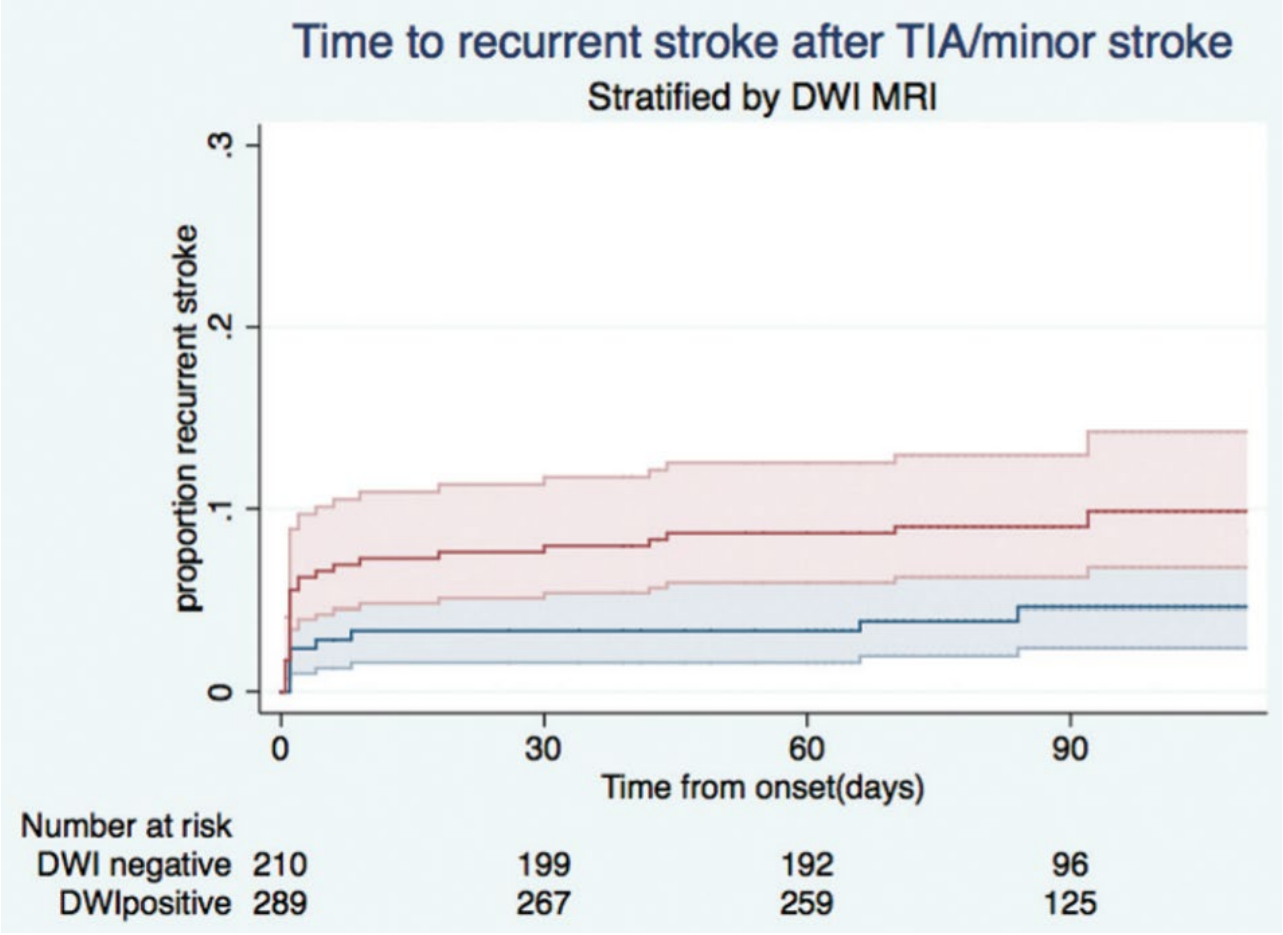


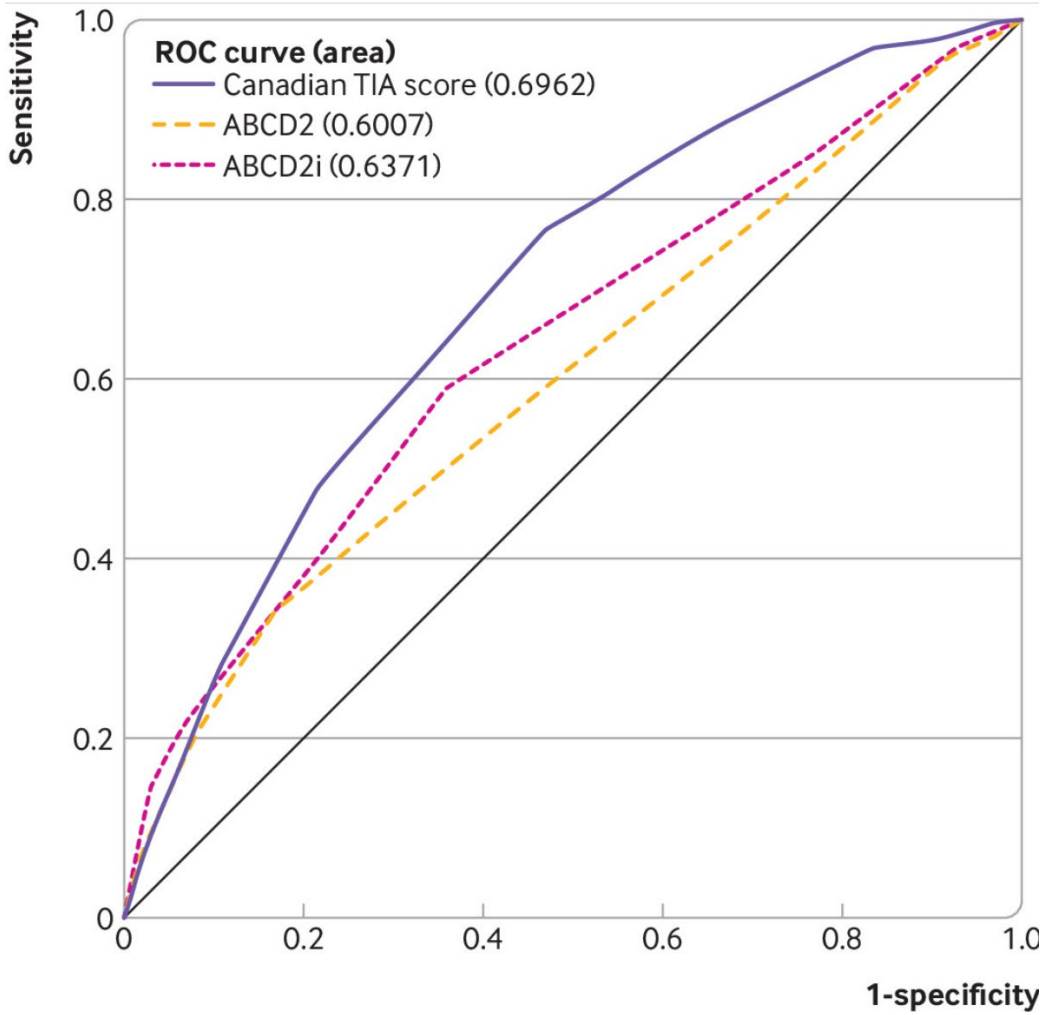
Table 3. Accuracy of CT/CTA and DWI MRI in Predicting Recurrent Stroke

	Sensitivity	Specificity	PPV	NPV
CT/CTA-positive metric	67% (49–81, 24/36)	68% (64–72, 316/463)	14% (9–20, 24/171)	96% (94–98, 316/328)
DWI-positive	75% (57–88, 27/36)	43% (39–48, 201/463)	9% (6–13, 27/289)	96% (92–98, 201/210)

Results are shown as percent (95% CI, no./No.).

PPV indicates positive predictive value; NPV, negative predictive value; CTA, CT angiography; DWI, diffusion-weighted imaging.

Coutts SB, Modi J, Patel SK, et al. CT/CT angiography and MRI findings predict recurrent stroke after transient ischemic attack and minor stroke: results of the prospective CATCH study. *Stroke*. 2012;43:1013-1017.



Canadian TIA score

OTTAWA

Clinical Findings	Points
First TIA (in lifetime)	2
Symptoms ≥ 10 minutes	2
Past History of **Carotid Stenosis**	2
Already on **Antiplatelet Therapy**	3
History of **Gait Disturbance**	1
History of **Unilateral Weakness**	1
History of **Vertigo**	-3
Initial Triage **Diastolic BP ≥ 110 mmhG**	3
Dysarthria or Aphasia (History or Physical)	1

Investigations in the ED	Points
Atrial Fibrillation on ECG	2
Infarction (new or old) on CT	1
Platelet count ≥ 400 x 10^9/L	2
Glucose ≥ 15 mmol/L	3

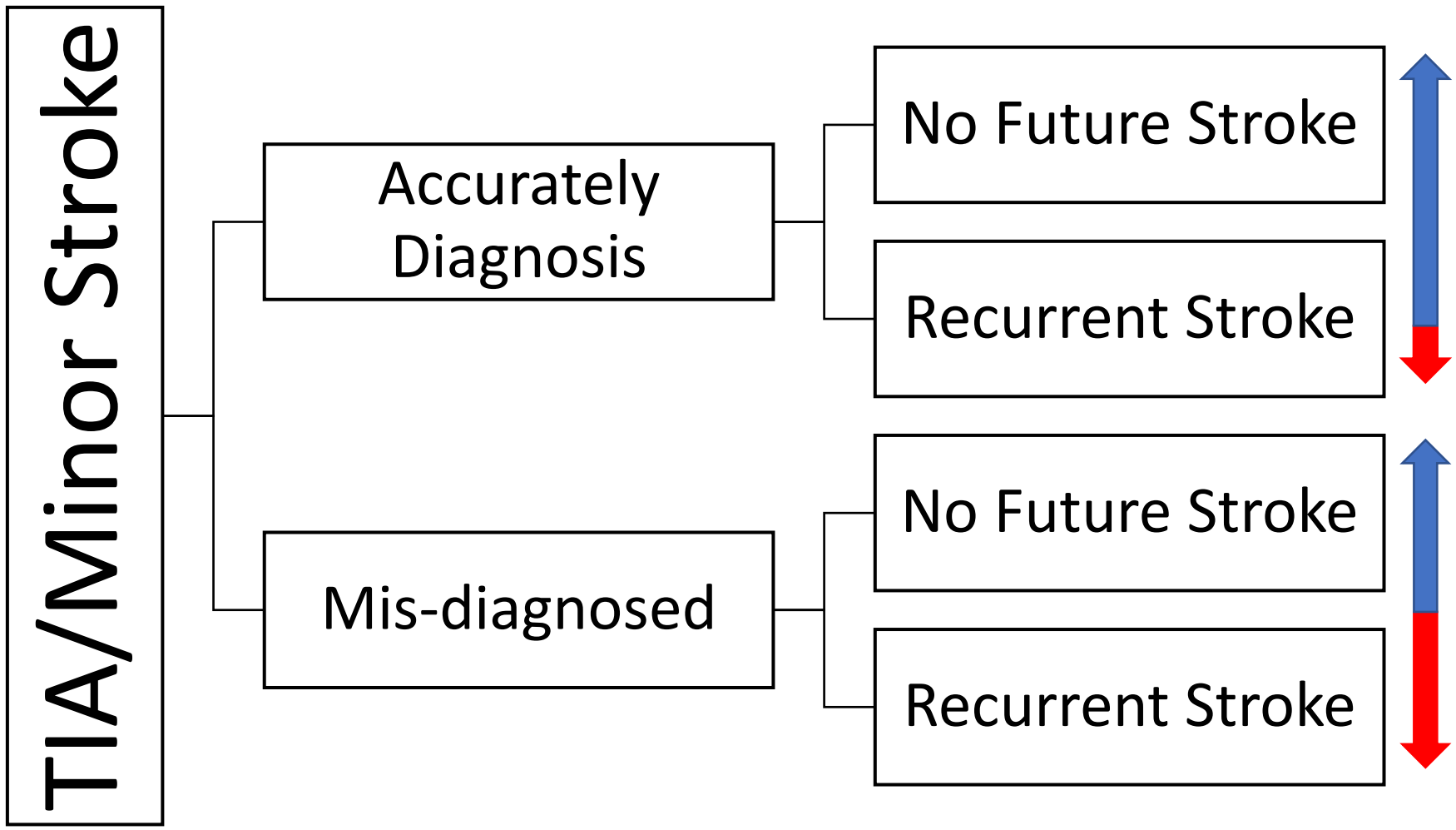
Calculated Risk Score

Risk of Stroke or Carotid Revascularization in 7 days

Low Risk (0.5%)	**-3 to 3**
Medium Risk (2.3%)	**4 to 8**
High Risk (5.9%)	**≥ 9**

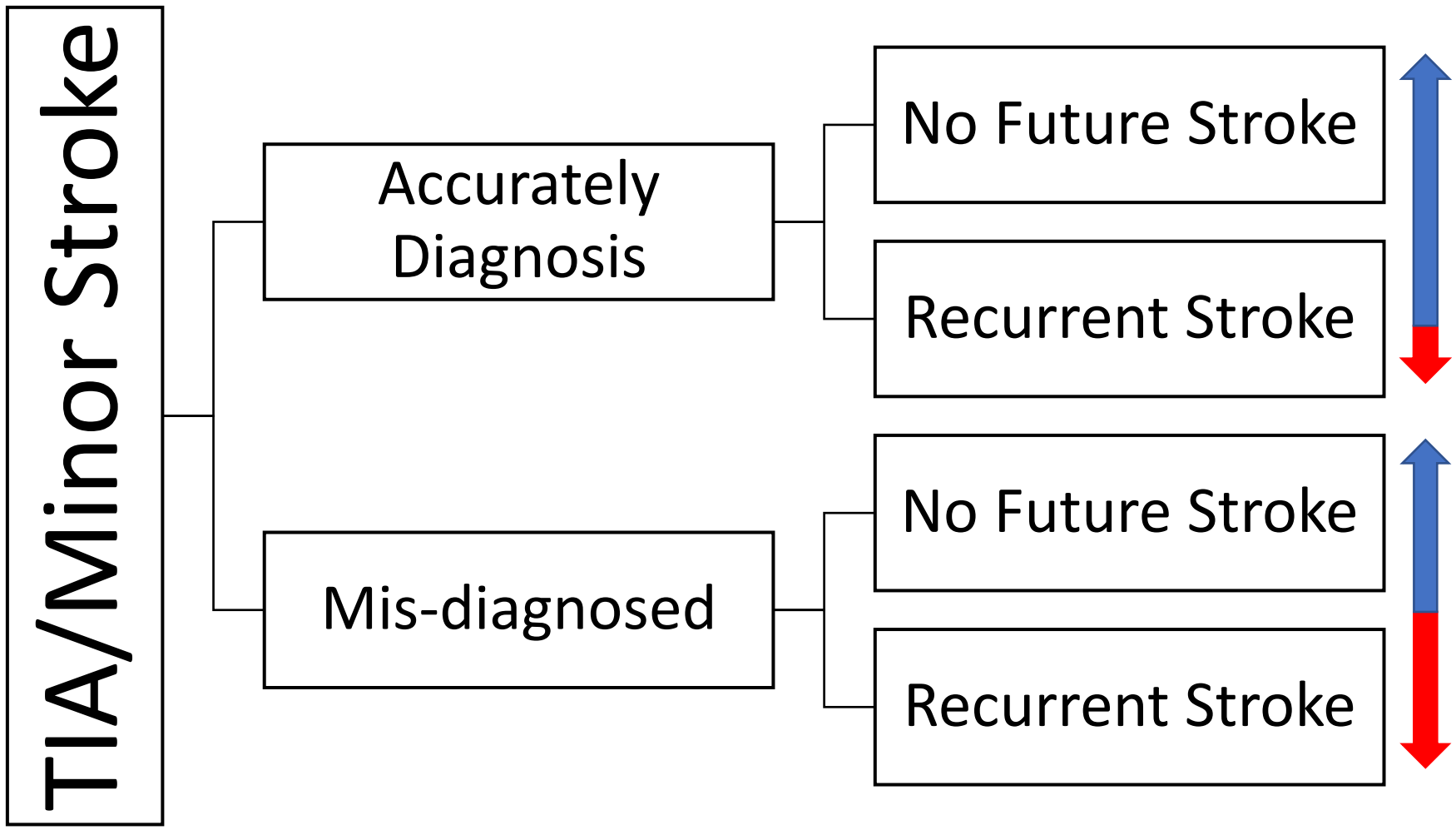
Perry Jeffrey J, Sivilotti Marco L A, Émond Marcel, Stiell Ian G, Stotts Grant, Lee Jacques et al. Prospective validation of Canadian TIA Score and comparison with ABCD2 and ABCD2i for subsequent stroke risk after transient ischaemic attack: multicentre prospective cohort study BMJ 2021; 372 :n49

Infographic created by Dr. Shahbaz Syed, Department of Emergency Medicine - University of Ottawa



Changing Natural History

1. Starting anti-platelet (dual anti-platelets)
2. Assessing for large vessel atherosclerosis. If cervical, CEA/ stenting
3. *Management of DM, lipids, HTN, lifestyle risk factors*
4. *Assessing for atrial fibrillation, if found then AC*
5. *Assessment for APLAS, if found then AC*
6. *In young patients under 60 without other risk factors, PFO detection and closure*



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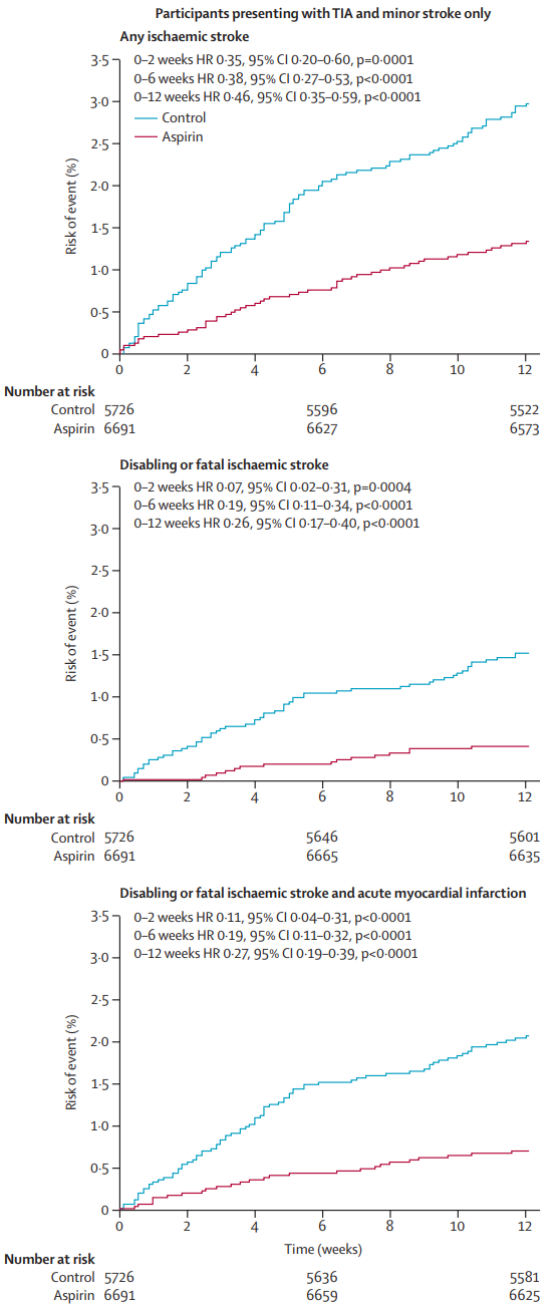
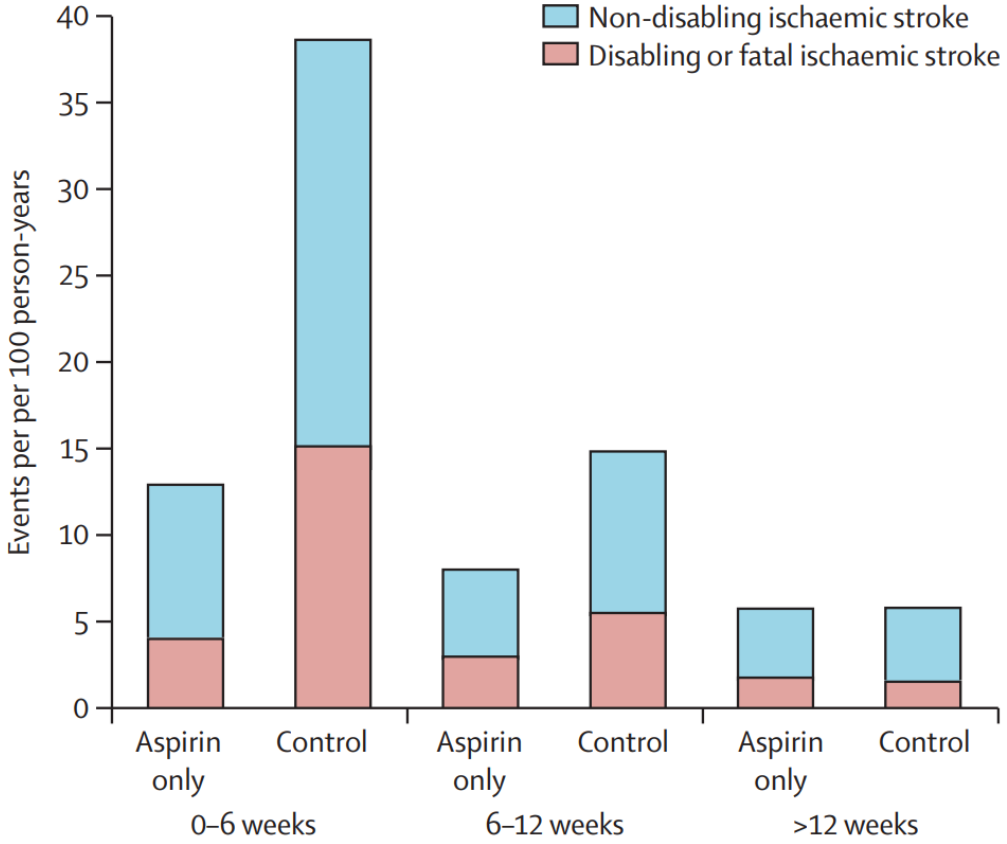
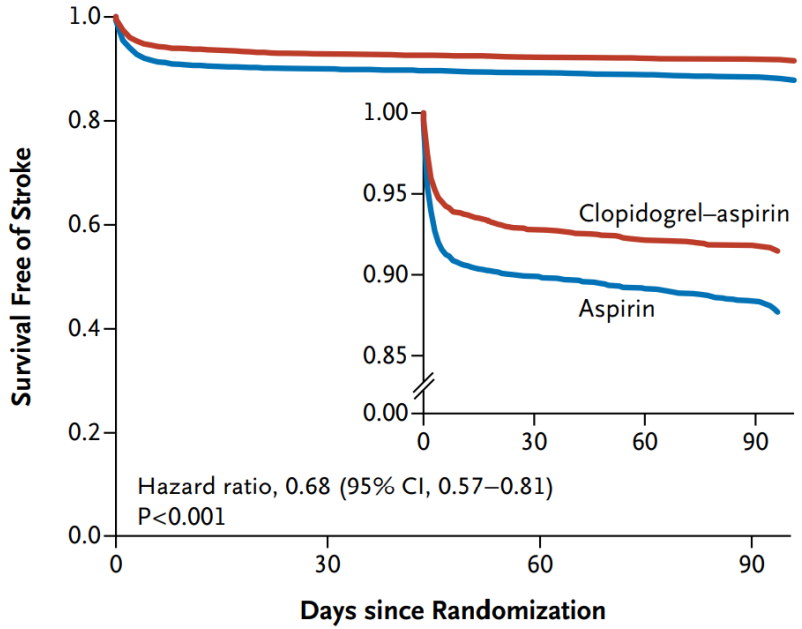




Rothwell PM, Prof, Algra A, Prof, Chen Z, Prof, Diener H, Prof, Norrving B, Prof, Mehta Z, DPhil. Effects of aspirin on risk and severity of early recurrent stroke after transient ischaemic attack and ischaemic stroke: time-course analysis of randomised trials. *The Lancet (British edition)*. 2016;388:365-375.



No. at Risk

Aspirin	2586	2307	2287	1906
Clopidogrel–aspirin	2584	2376	2361	1989

CHANCE

Within 24 hours of symptoms:

NIHSS ≤3

ABCD≥4

Arms:

Plavix load 300 and then 75 mg until day 90 days with ASA load (75-300 mg) and then 20 days of ASA vs. 90 days of ASA

Table 2. Efficacy and Safety Outcomes.

Outcome	Aspirin (N=2586)		Clopidogrel and Aspirin (N=2584)		Hazard Ratio (95% CI)	P Value
	Patients with Event *no.*	Event Rate %	Patients with Event *no.*	Event Rate %		
Primary outcome						
Stroke	303	11.7	212	8.2	0.68 (0.57–0.81)	<0.001
Secondary outcomes						
Stroke, myocardial infarction, or death from cardiovascular causes	307	11.9	216	8.4	0.69 (0.58–0.82)	<0.001
Ischemic stroke	295	11.4	204	7.9	0.67 (0.56–0.81)	<0.001
Hemorrhagic stroke	8	0.3	8	0.3	1.01 (0.38–2.70)	0.98
Myocardial infarction	2	0.1	3	0.1	1.44 (0.24–8.63)	0.69
Death from cardiovascular causes	5	0.2	6	0.2	1.16 (0.35–3.79)	0.81
Death from any cause	10	0.4	10	0.4	0.97 (0.40–2.33)	0.94
Transient ischemic attack	47	1.8	39	1.5	0.82 (0.53–1.26)	0.36
Safety outcomes						
Bleeding*						
Severe	4	0.2	4	0.2	0.94 (0.24–3.79)	0.94
Moderate	4	0.2	3	0.1	0.73 (0.16–3.26)	0.68
Mild	19	0.7	30	1.2	1.57 (0.88–2.79)	0.12
Any bleeding	41	1.6	60	2.3	1.41 (0.95–2.10)	0.09

Wang Y, Wang Y, Zhao X, et al. Clopidogrel with Aspirin in Acute Minor Stroke or Transient Ischemic Attack. *The New England journal of medicine*. 2013;369:11-19

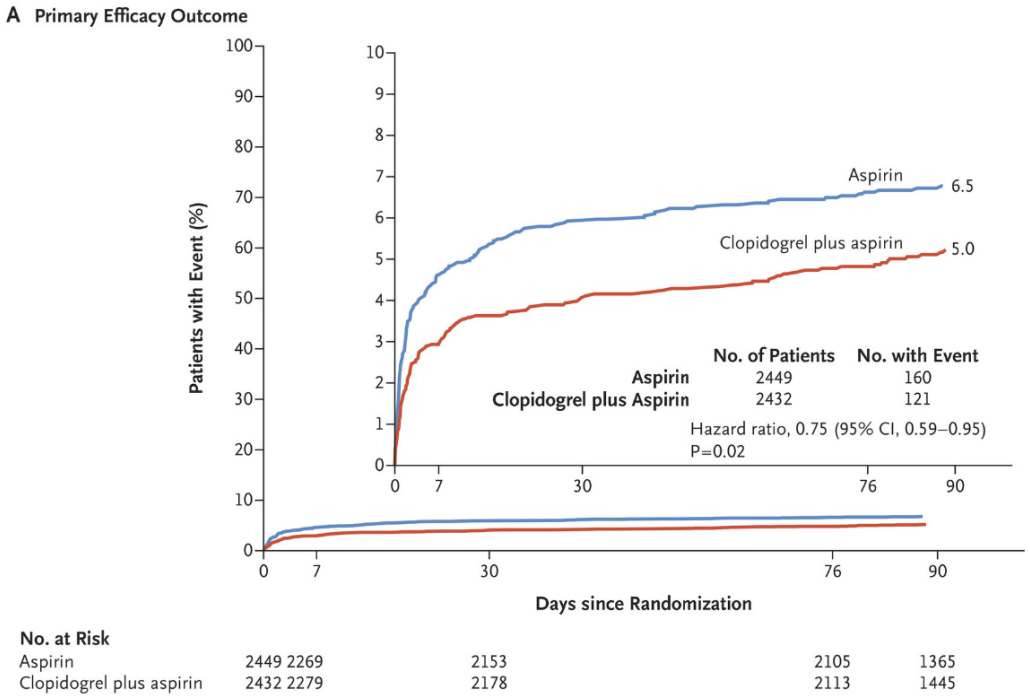


Table 2. Efficacy and Safety Outcomes.

Outcome	Clopidogrel plus Aspirin (N=2432)	Aspirin (N=2449)	Hazard Ratio (95% CI)	P Value
	number (percent)			
Primary efficacy outcome				
Composite of ischemic stroke, myocardial infarction, or death from ischemic vascular causes	121 (5.0)	160 (6.5)	0.75 (0.59–0.95)	0.02
Secondary efficacy outcomes				
Ischemic stroke	112 (4.6)	155 (6.3)	0.72 (0.56–0.92)	0.01*
Myocardial infarction	10 (0.4)	7 (0.3)	1.44 (0.55–3.78)	0.46*
Death from ischemic vascular causes	6 (0.2)	4 (0.2)	1.51 (0.43–5.35)	0.52*
Ischemic or hemorrhagic stroke	116 (4.8)	156 (6.4)	0.74 (0.58–0.94)	0.01*
Composite of ischemic stroke, myocardial infarction, death from ischemic vascular causes, or major hemorrhage	141 (5.8)	167 (6.8)	0.84 (0.67–1.05)	0.13*
Primary safety outcome				
Major hemorrhage	23 (0.9)	10 (0.4)	2.32 (1.10–4.87)	0.02
Other safety outcomes				
Hemorrhagic stroke	5 (0.2)	3 (0.1)	1.68 (0.40–7.03)	0.47
Symptomatic intracerebral hemorrhage	2 (0.1)	2 (0.1)	1.01 (0.14–7.14)	0.99
Other symptomatic intracranial hemorrhage	2 (0.1)	0		0.16
Major hemorrhage other than intracranial hemorrhage	17 (0.7)	7 (0.3)	2.45 (1.01–5.90)	0.04
Minor hemorrhage	40 (1.6)	13 (0.5)	3.12 (1.67–5.83)	<0.001
Death from any cause	18 (0.7)	12 (0.5)	1.51 (0.73–3.13)	0.27

* Post hoc correction for multiple testing of five secondary end points by the Bonferroni method resulted in a P value of 0.01 to indicate a significant difference between groups.

POINT

Within 12 hours of symptoms:

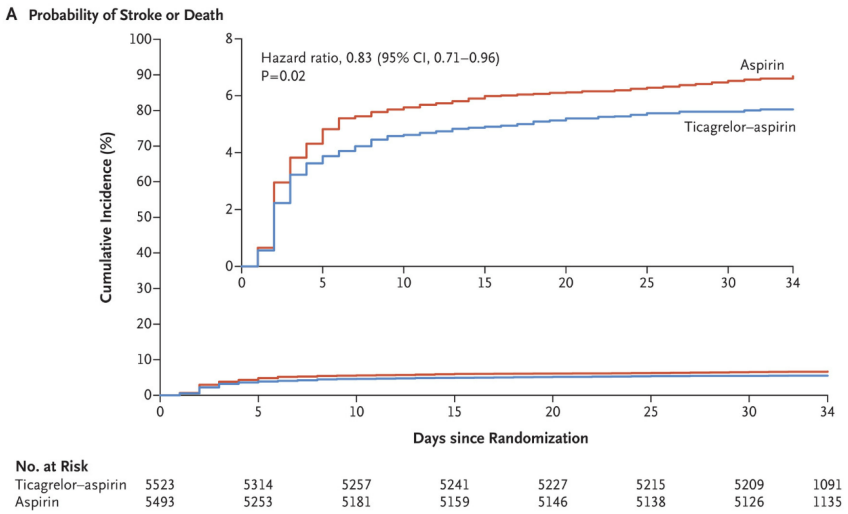
NIHSS ≤3

ABCD≥4

Arms:

Plavix load 600mg and then 75 mg until day 90 days with ASA (50-325 mg) vs. ASA only

Johnston SC, Easton JD, Farrant M, et al. Clopidogrel and Aspirin in Acute Ischemic Stroke and High-Risk TIA. *The New England journal of medicine*. 2018;379:215-225.



THALES

Within 24 hours of symptoms:

NIHSS ≤5

ABCD≥6

Arms:

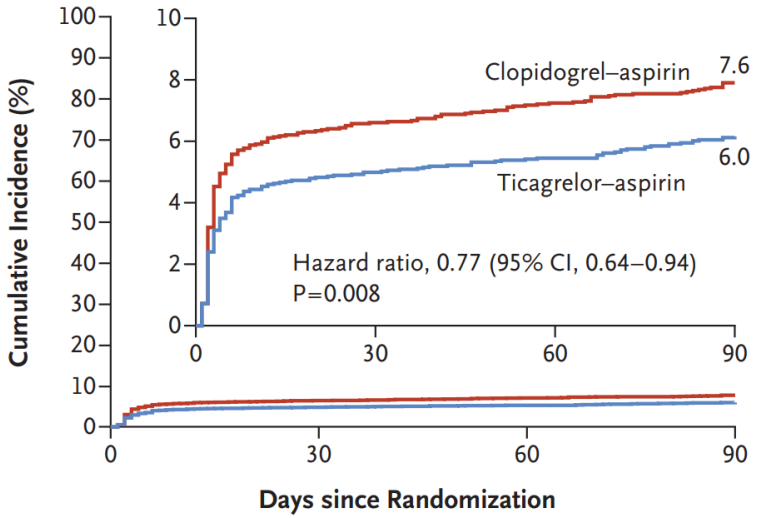
30-day regimen of either ticagrelor (180-mg loading dose followed by 90 mg twice daily) plus ASA (300 to 325 mg on the first day followed by 75 to 100 mg daily) vs ASA

Table 2. Efficacy and Safety Outcomes.*

Outcome	Ticagrelor–Aspirin Group (N=5523)		Aspirin Group (N=5493)		Hazard Ratio (95% CI)	P Value
	Patients with Event no. (%)	Event Rate† %	Patients with Event no. (%)	Event Rate† %		
Primary outcome						
Stroke or death	303 (5.5)	5.4	362 (6.6)	6.5	0.83 (0.71–0.96)	0.02
Stroke	284 (5.1)	5.1	347 (6.3)	6.3	0.81 (0.69–0.95)	
Death	36 (0.7)	0.6	27 (0.5)	0.5	1.33 (0.81–2.19)	
Secondary outcomes						
Ischemic stroke	276 (5.0)	5.0	345 (6.3)	6.2	0.79 (0.68–0.93)	0.004
Overall disability‡	1282 (23.8)	NA	1284 (24.1)	NA	0.98 (0.89–1.07)	0.61
Safety outcomes						
Severe bleeding	28 (0.5)	0.5	7 (0.1)	0.1	3.99 (1.74–9.14)	0.001
Intracranial hemorrhage or fatal bleeding	22 (0.4)	0.4	6 (0.1)	0.1	3.66 (1.48–9.02)	0.005
Fatal bleeding	11 (0.2)		2 (<0.1)			
Intracranial hemorrhage	20 (0.4)	0.4	6 (0.1)	0.1	3.33 (1.34–8.28)	0.01
Hemorrhagic stroke	10 (0.2)		2 (<0.1)			
Moderate or severe bleeding	36 (0.7)	0.6	11 (0.2)	0.2	3.27 (1.67–6.43)	<0.001
Premature permanent discontinuation of trial treatment owing to bleeding	152 (2.8)	2.9	32 (0.6)	0.6	4.80 (3.28–7.02)	<0.001

* NA denotes not applicable.
† Event rates are Kaplan–Meier estimates of the percentage of patients with events.
‡ Overall disability was determined by a score greater than 1 on the modified Rankin scale. The odds ratio is shown rather than the hazard ratio (5386 patients in the ticagrelor–aspirin group and 5333 patients in the aspirin group).

Johnston SC, Amarenco P, Denison H, et al. Ticagrelor and Aspirin or Aspirin Alone in Acute Ischemic Stroke or TIA. *The New England journal of medicine*. 2020;383:207-217.



CHANCE 2

Within 24 hours of symptoms with CYP2C19 loss-of-function allele:

NIHSS ≤3

ABCD≥4

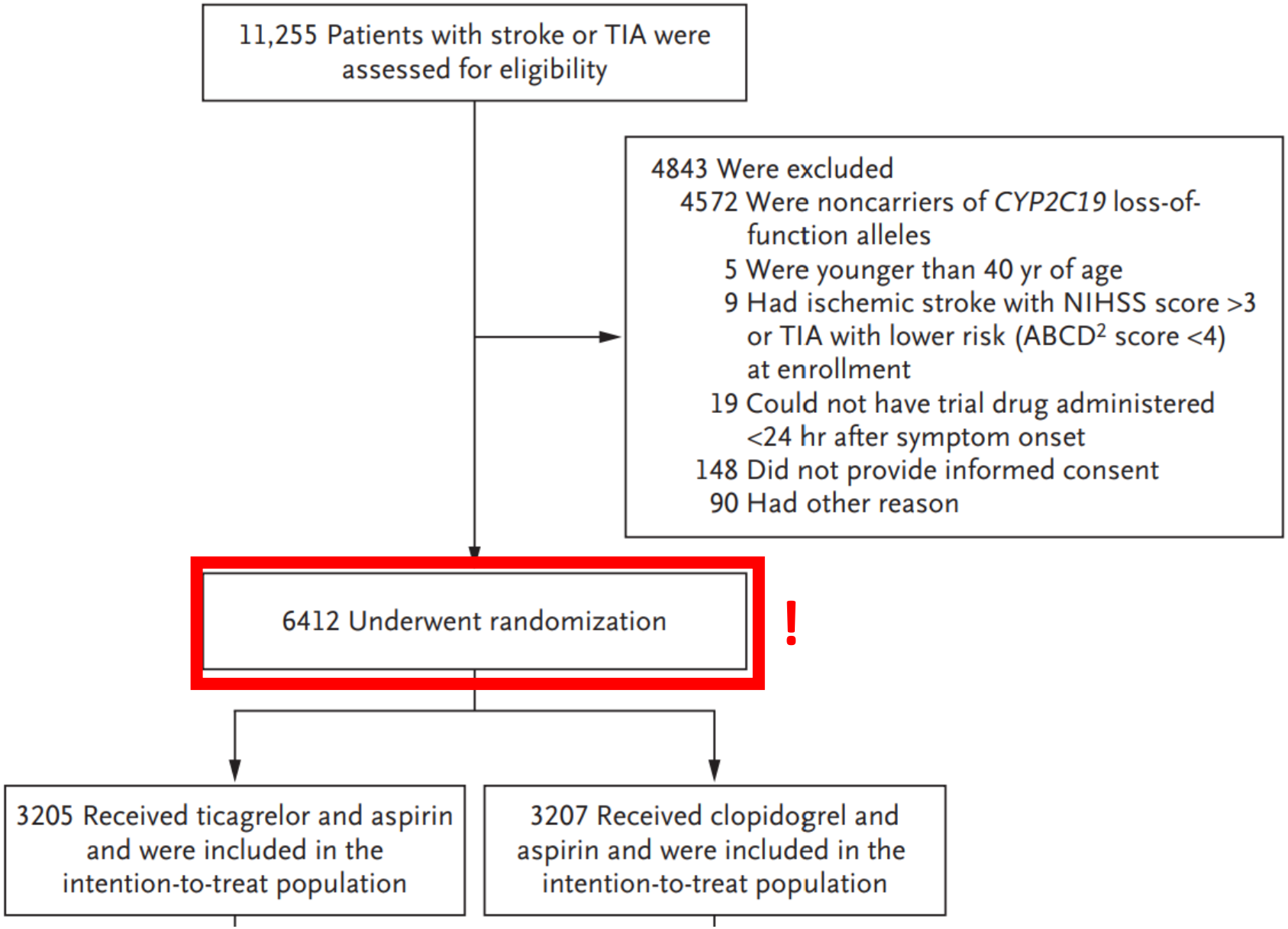
Arms:

Ticagrelor (180 mg on day 1 followed by 90 mg twice daily on days 2 through 90) plus ASA for 21 days and placebo clopidogrel vs. clopidogrel (300 mg on day 1 followed by 75 mg once daily on days 2 through 90) plus ASA for 21 days and placebo ticagrelor

Table 2. Efficacy and Safety Outcomes.

Outcome	Ticagrelor–Aspirin (N=3205)		Clopidogrel–Aspirin (N=3207)		Hazard Ratio or Odds Ratio (95% CI)*	P Value
	Patients with Event	Incidence†	Patients with Event	Incidence†		
	no.	%	*no.*	%		
Primary outcome						
Stroke	191	6.0	243	7.6	0.77 (0.64–0.94)	0.008
Secondary outcome‡						
Stroke within 30 days	156	4.9	205	6.4	0.75 (0.61–0.93)	
Vascular event§	229	7.2	293	9.2	0.77 (0.65–0.92)	
Ischemic stroke	189	5.9	238	7.4	0.78 (0.65–0.95)	
Stroke with any disability¶	97	3.1	92	2.9	1.02 (0.77–1.36)	
Ordinal stroke or TIA‖					0.79 (0.66–0.94)	
Fatal stroke: score of 6 on modified Rankin scale	4	0.1	8	0.2		
Severe stroke: score of 4 or 5 on modified Rankin scale	30	0.9	21	0.7		
Moderate stroke: score of 2 or 3 on modified Rankin scale	63	2.0	63	2.0		
Mild stroke: score of 0 or 1 on modified Rankin scale	94	2.9	151	4.7		
TIA	34	1.1	40	1.2		
No stroke or TIA	2980	93.0	2924	91.2		
Primary safety outcome						
Severe or moderate bleeding**	9	0.3	11	0.3	0.82 (0.34–1.98)	0.66
Fatal bleeding	3	0.1	3	0.1	0.97 (0.20–4.81)	
Intracranial hemorrhage	3	0.1	6	0.2	0.49 (0.12–1.96)	
Secondary safety outcome						
Any bleeding	170	5.3	80	2.5	2.18 (1.66–2.85)	
Mild bleeding**	161	5.0	69	2.2	2.41 (1.81–3.20)	
Death	9	0.3	18	0.6	0.50 (0.22–1.11)	

Wang Y, Meng X, Wang A, et al. Ticagrelor versus Clopidogrel in CYP2C19 Loss-of-Function Carriers with Stroke or TIA. *The New England journal of medicine*. 2021;385:2520-2530.



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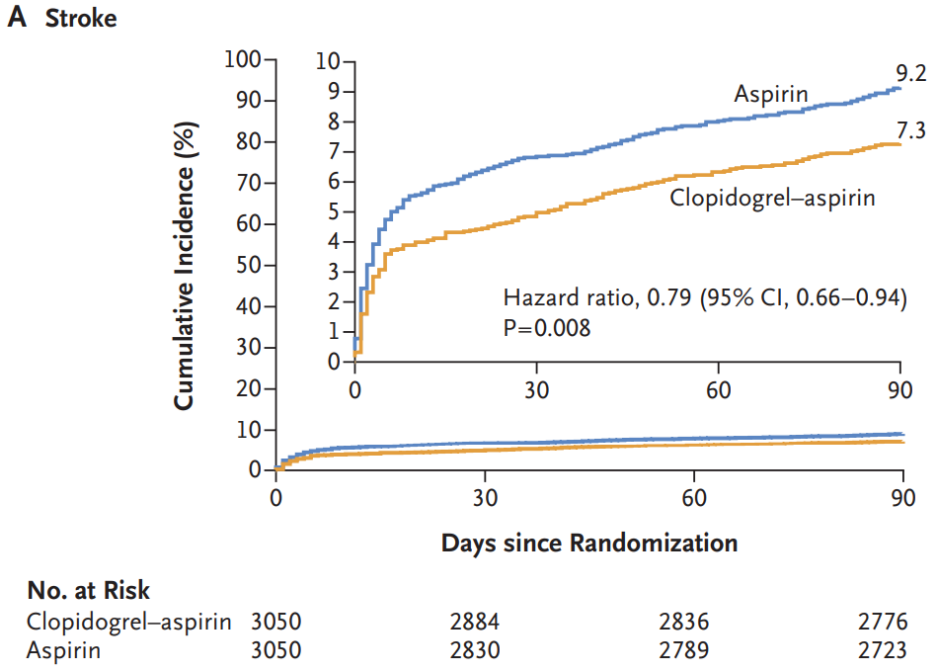


INSPIRES

Within 72 hours of symptoms:

NIHSS ≤5 OR

ABCD≥4

OR within 24 hour if NIHSS 4-5 AND minor stroke

And had ipsilateral large artery stenosis of 50% or multiple infarcts if large artery stenosis of less than 50%

Arms:

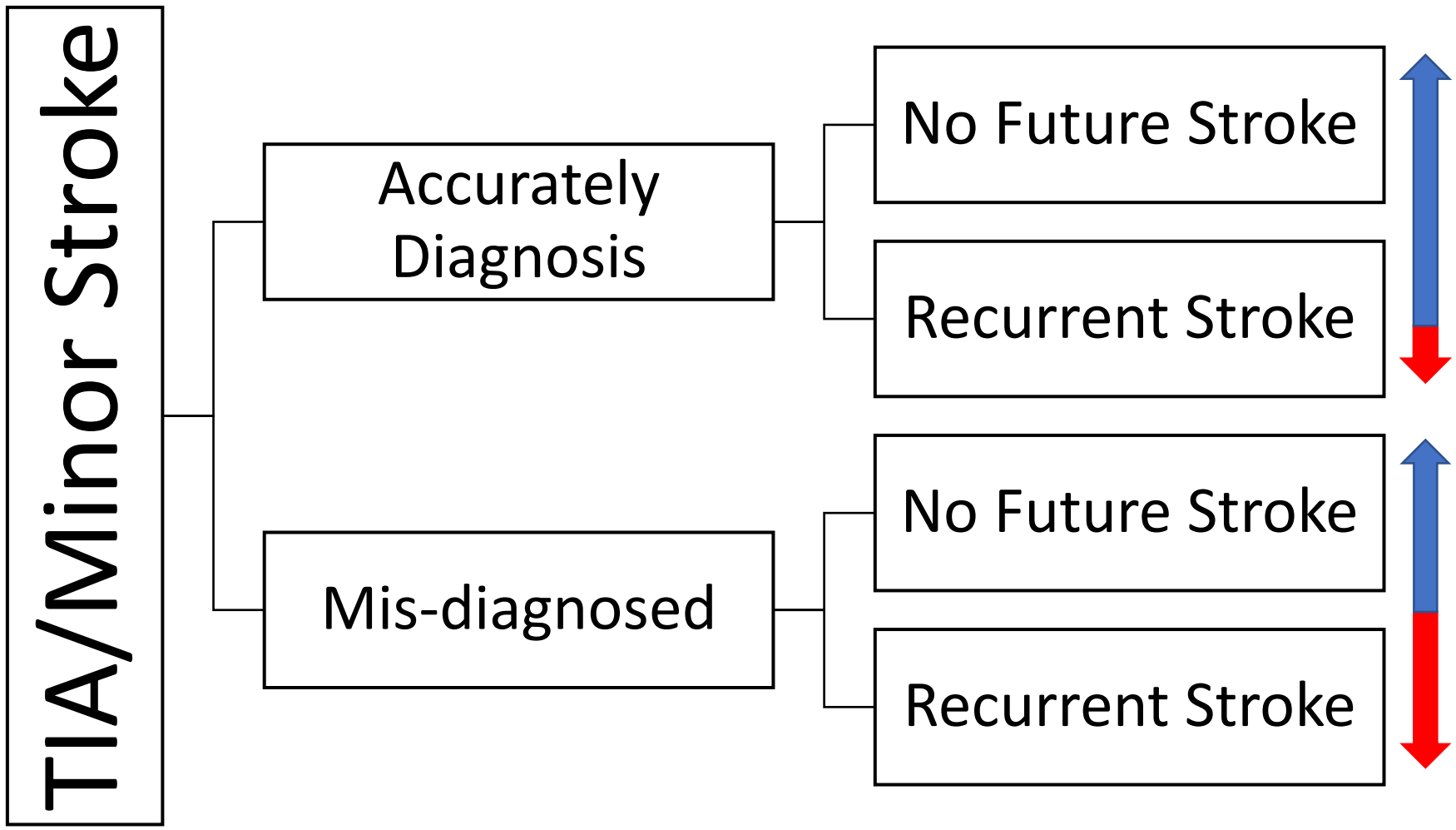
Clopidogrel (300 mg on day 1 and 75 mg daily on days 2 to 90) plus aspirin (100 to 300 mg on day 1 and 100 mg daily on days 2 to 21) or matching clopidogrel placebo plus aspirin (100 to 300 mg on day 1 and 100 mg daily on days 2 to 90)

Outcome	Clopidogrel–Aspirin (N=3050)		Aspirin (N=3050)		Hazard Ratio or Relative Risk (95% CI)*	P Value
	Patients with Event	Incidence†	Patients with Event	Incidence†		
		%		%		
Primary outcome						
Stroke, including ischemic and hemorrhagic stroke — no.	222	7.3	279	9.2	0.79 (0.66–0.94)	0.008
Secondary outcomes						
Composite cardiovascular event (stroke, myocardial infarction, or death from cardiovascular causes) — no.	229	7.5	282	9.3	0.80 (0.67–0.96)	
Ischemic stroke — no.	208	6.8	274	9.0	0.75 (0.63–0.90)	
Recurrent stroke	159	5.3	205	6.8	0.77 (0.62–0.94)	
TIA with infarction	5	0.2	11	0.4	0.45 (0.16–1.29)	
Progressive stroke‡	44	1.5	58	1.9	0.75 (0.51–1.11)	
Hemorrhagic stroke — no.	15	0.5	5	0.2	3.01 (1.09–8.28)	
TIA — no.	21	0.7	39	1.3	0.54 (0.32–0.91)	
Myocardial infarction — no.	5	0.2	2	0.1	2.50 (0.49–12.90)	
Death from cardiovascular causes — no.	21	0.7	15	0.5	1.40 (0.72–2.72)	
Poor functional outcome — no./total no.§	301/3047	9.9	346/3046	11.4	0.87 (0.76–0.99)	
Six-level assessment of new stroke — no./total no.¶					0.76 (0.64–0.91)	
5: Fatal stroke	20/3049	0.7	13/3049	0.4		
4: Severe stroke	28/3049	0.9	27/3049	0.9		
3: Moderate stroke	69/3049	2.3	102/3049	3.3		
2: Mild stroke	104/3049	3.4	136/3049	4.5		
1: TIA	21/3049	0.7	35/3049	1.1		
0: No stroke or TIA	2807/3049	92.1	2736/3049	89.7		
Primary safety outcome						
Moderate-to-severe bleeding — no.‖	27	0.9	13	0.4	2.08 (1.07–4.04)	0.03
Secondary safety outcomes						
Hepatotoxic effects — no.**	39	1.3	32	1.0	1.22 (0.86–1.74)	
Muscle toxic effects — no.††	2	0.07	1	0.03	2.00 (0.18–22.04)	
Death from any cause — no.	37	1.2	30	1.0	1.24 (0.76–2.00)	
Any bleeding — no.‖	94	3.1	63	2.1	1.50 (1.09–2.06)	
Intracranial hemorrhage	17	0.6	8	0.3	2.13 (0.92–4.93)	
Mild bleeding	70	2.3	51	1.7	1.38 (0.96–1.97)	

Gao Y, Chen W, Pan Y, et al. Dual Antiplatelet Treatment up to 72 Hours after Ischemic Stroke. *The New England journal of medicine*. 2023;389:2413-2424.

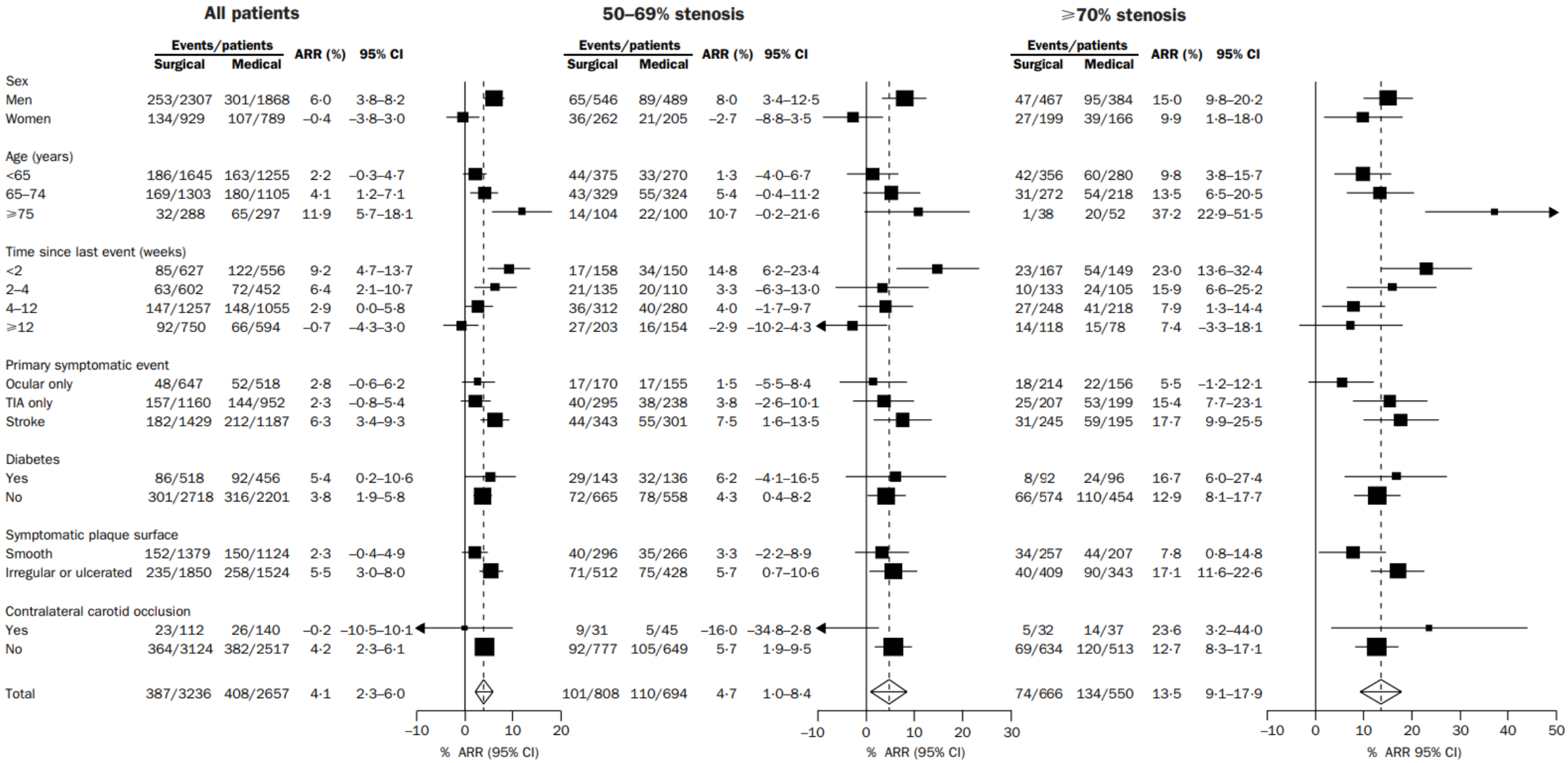
Take home message

- Start antiplatelet EARLY
- Individuals presenting within 48 hours of symptoms consistent with minor stroke or TIA (especially transient focal motor or speech symptoms, or persistent stroke symptoms) should be immediately sent to an emergency department with capacity for stroke care (including on-site brain imaging)
- Urgent brain imaging (CT or MRI) with concurrent neurovascular imaging (e.g., CT angiography [CTA]) should be completed as soon as possible and before discharge from the Emergency Department
- Antiplatelet strategy based on ABCD2 (Canadian TIA score in the ED)

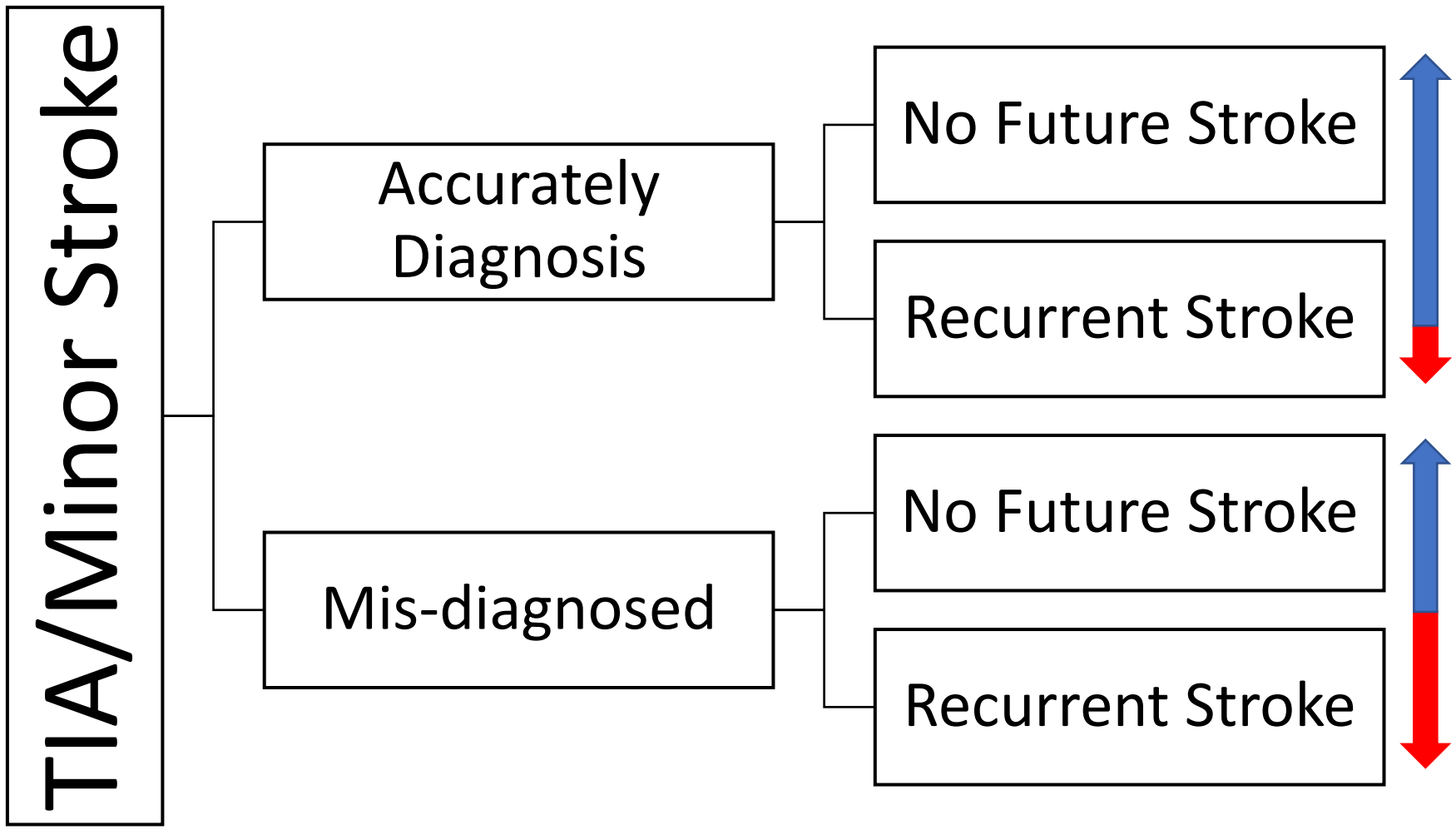


Changing Natural History

1. Starting anti-platelet (dual anti-platelets)
2. **Assessing for large vessel atherosclerosis. If cervical, CEA/ stenting**
3. *Management of DM, lipids, HTN, lifestyle risk factors*
4. *Assessing for atrial fibrillation, if found then AC*
5. *Assessment for APLAS, if found then AC*
6. *In young patients under 65 without other risk factors, PFO detection and closure*



Rothwell P, Eliasziw M, Gutnikov S, et al. Endarterectomy for symptomatic carotid stenosis in relation to clinical subgroups and timing of surgery. *The Lancet (British edition)*. 2004;363:915-924.



Changing Natural History

1. Starting anti-platelet (dual anti-platelets)
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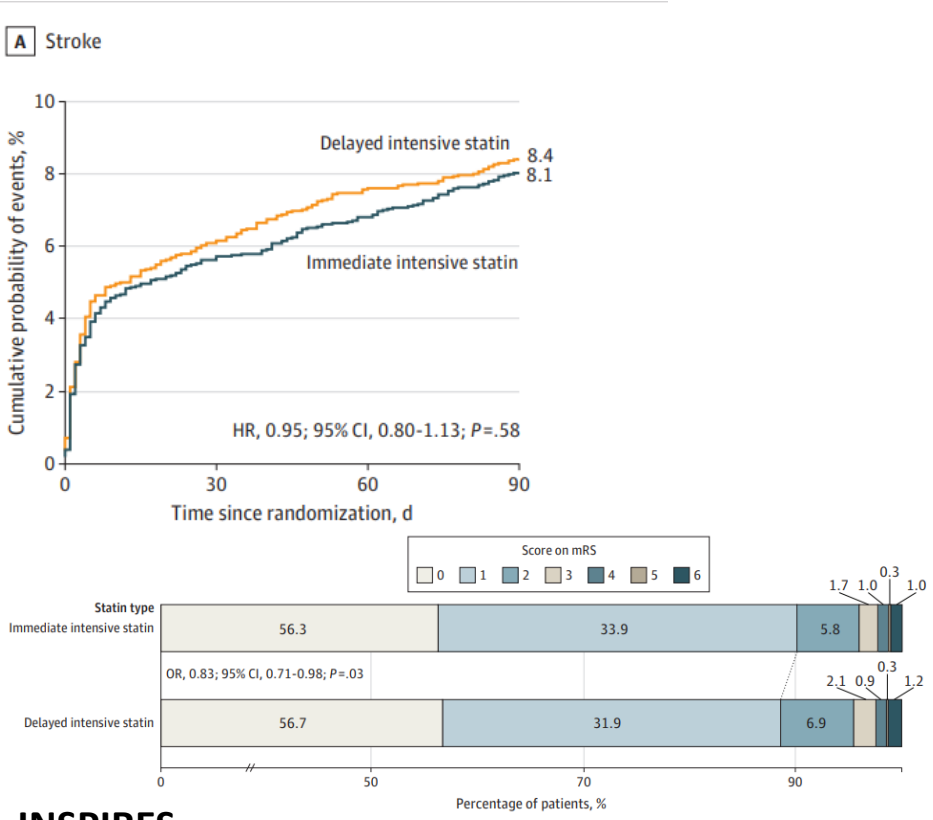


Outcome	Immediate-intensive statin (n = 3050) Patients with event, No.	Event rate, %[a]	Delayed-intensive statin (n = 3050) Patients with event, No.	Event rate, %[a]	Treatment effect (95% CI)[b]	*P* value
Primary outcome (full analysis set)						
Stroke (including ischemic and hemorrhagic stroke)	245	8.1	256	8.4	0.95 (0.80 to 1.13)	.58
Secondary outcomes (full analysis set)						
Composite vascular event (stroke, myocardial infarction, or vascular death)	251	8.2	260	8.6	0.96 (0.81 to 1.14)	.64
Ischemic stroke	235	7.7	247	8.1	0.95 (0.79 to 1.13)	.55
Recurrent stroke	173	5.8	191	6.4	0.90 (0.73 to 1.11)	.31
TIA with infarctions	10	0.3	6	0.2	1.65 (0.60 to 4.55)	.33
Progressive stroke	52	1.7	50	1.7	1.04 (0.71 to 1.54)	.84
Hemorrhagic stroke	11	0.4	9	0.3	1.22 (0.51 to 2.95)	.66
TIA	29	1.0	31	1.0	0.94 (0.56 to 1.55)	.79
Myocardial infarction	4	0.1	3	0.1	1.33 (0.30 to 5.95)	.71
Vascular death	18	0.6	18	0.6	1.00 (0.52 to 1.92)	>.99
Poor functional outcome (mRS 2-6), No./total No.[c]	299/3047	9.8	348/3046	11.4	0.83 (0.71 to 0.98)	.03
Early neurological deterioration (the change of NIHSS score at 7 d), median (IQR)[d]	0 (−1 to 0)		0 (−1 to 0)		−0.02 (−0.12 to 0.08)	.70

INSPIRES

Within 72 hours of symptoms:

NIHSS ≤5 OR

ABCD≥4

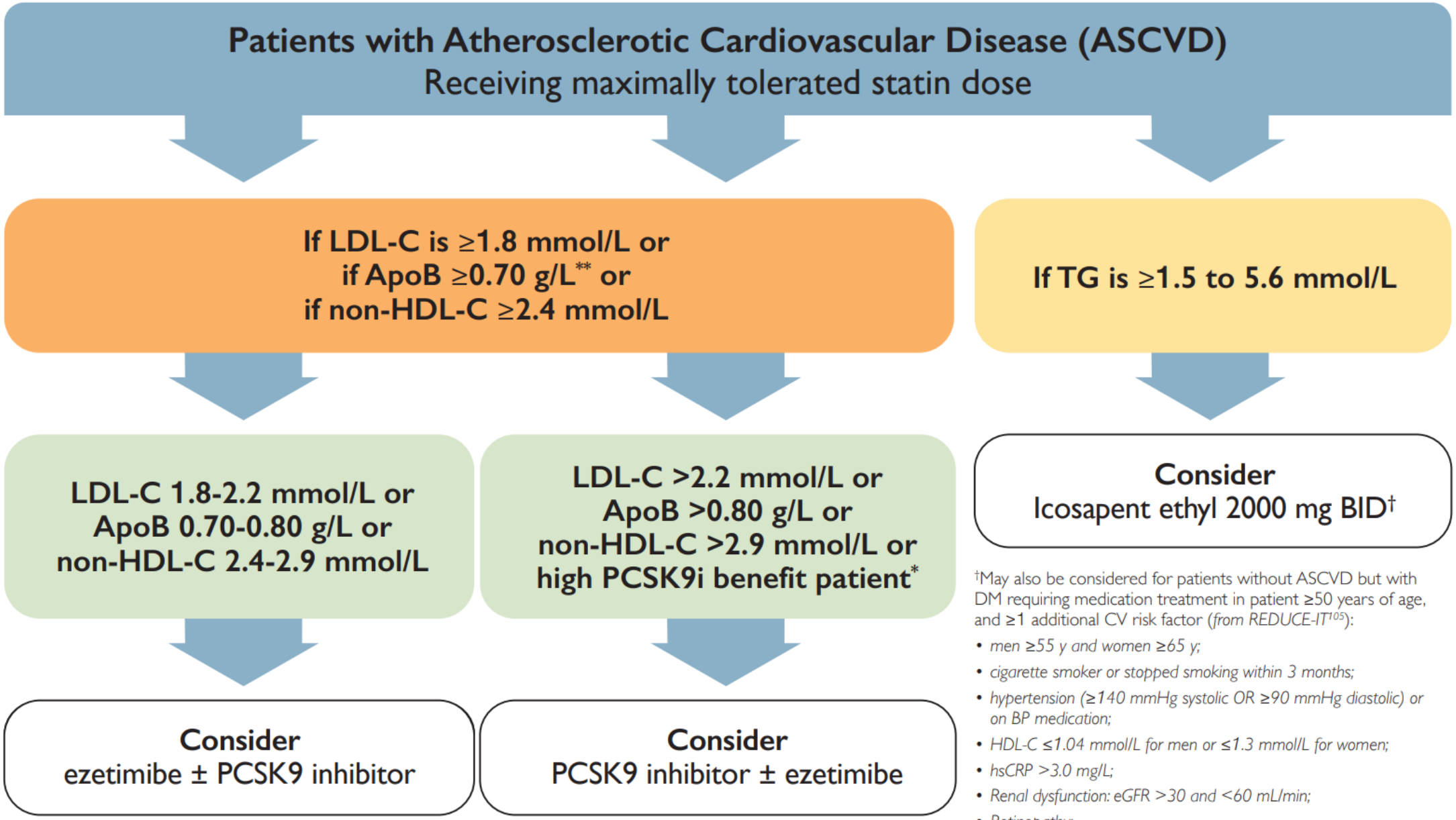
OR within 24 hour if NIHSS 4-5 AND minor stroke

And had ipsilateral large artery stenosis of 50% or multiple infarcts if large artery stenosis of less than 50%

Arms:

immediate-intensive statin therapy group received Atorvastatin, 80 mg daily (day 1-21) followed by 40 mg daily (day 22-90). Participants in the delayed intensive statin therapy group received placebo for days 1-3, followed by atorvastatin, 40 mg daily (days 4-90)

Gao Y, Jiang L, Pan Y, et al. Immediate- or Delayed-Intensive Statin in Acute Cerebral Ischemia: The INSPIRES Randomized Clinical Trial. *JAMA neurology*. 2024;81:741.



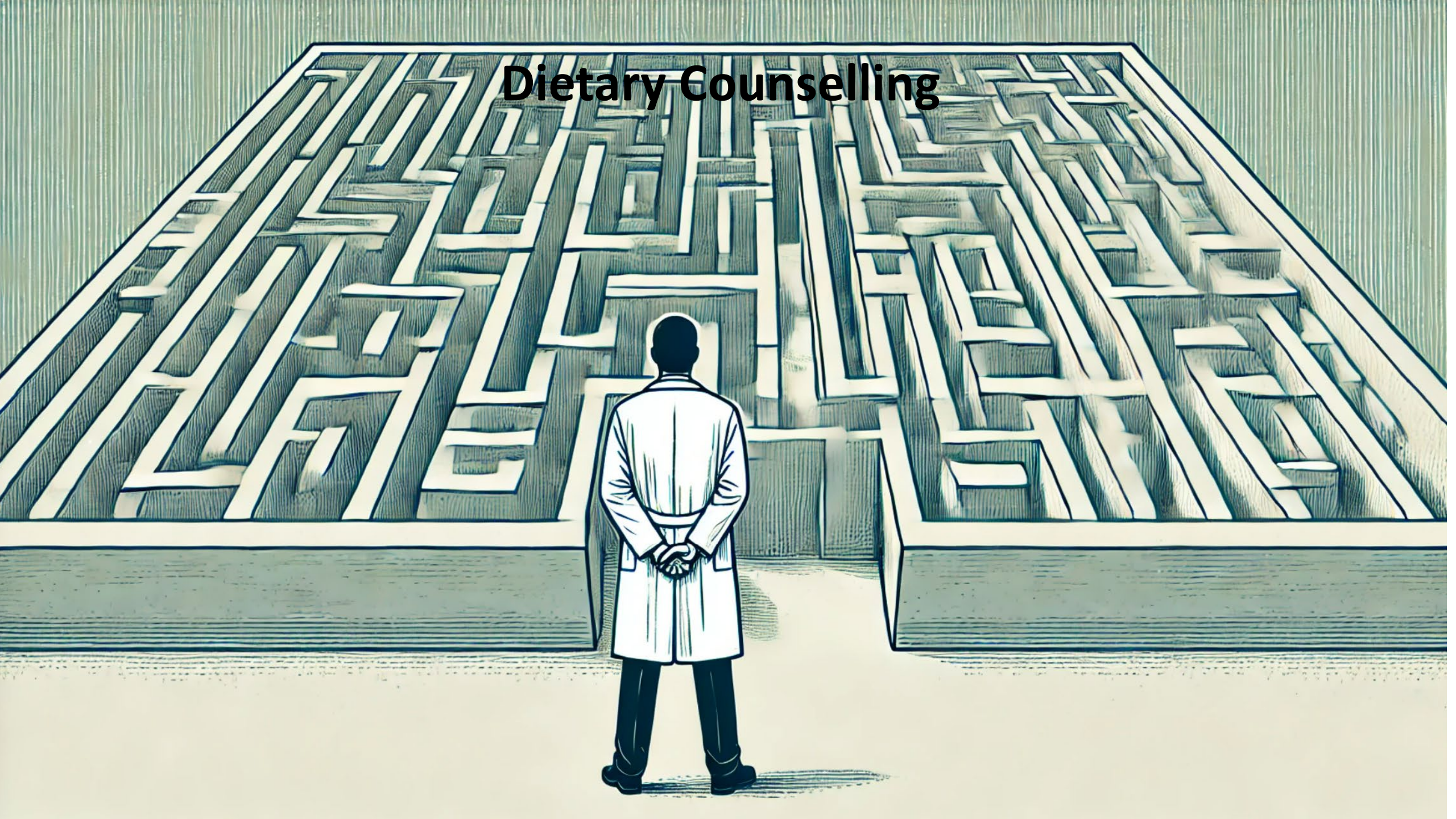
*Patients shown to derive largest benefit form intensification of statin therapy with PCSK9 inhibitor therapy are identified in Table 3.

**At low levels of LDL-C or non-HDL-C, measurement of apoB is more accurate than other markers.

†May also be considered for patients without ASCVD but with DM requiring medication treatment in patient ≥50 years of age, and ≥1 additional CV risk factor (*from REDUCE-IT*[105]):

- *men ≥55 y and women ≥65 y;*
- *cigarette smoker or stopped smoking within 3 months;*
- *hypertension (≥140 mmHg systolic OR ≥90 mmHg diastolic) or on BP medication;*
- *HDL-C ≤1.04 mmol/L for men or ≤1.3 mmol/L for women;*
- *hsCRP >3.0 mg/L;*
- *Renal dysfunction: eGFR >30 and <60 mL/min;*
- *Retinopathy;*
- *Micro- or macroalbuminuria;*
- *ABI <0.9 without symptoms of intermittent claudication)*

Dietary Counselling



Associations of fats and carbohydrate intake with cardiovascular disease and mortality in 18 countries from five continents (PURE): a prospective cohort study

Dr Mahshid Dehghan, PhD [a] · Andrew Mente, PhD [a,b] · Xiaohe Zhang, MSc [a] · Sumathi Swaminathan, PhD [c] · Prof Wei Li, PhD [d] · Prof Viswanathan Mohan, MD [e] · et al. Show more

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PURE

Jan 1, 2003-March 31, 2013

Individuals aged 35–70 years from 18 low-income, middle-income, and high-income countries on five continents.

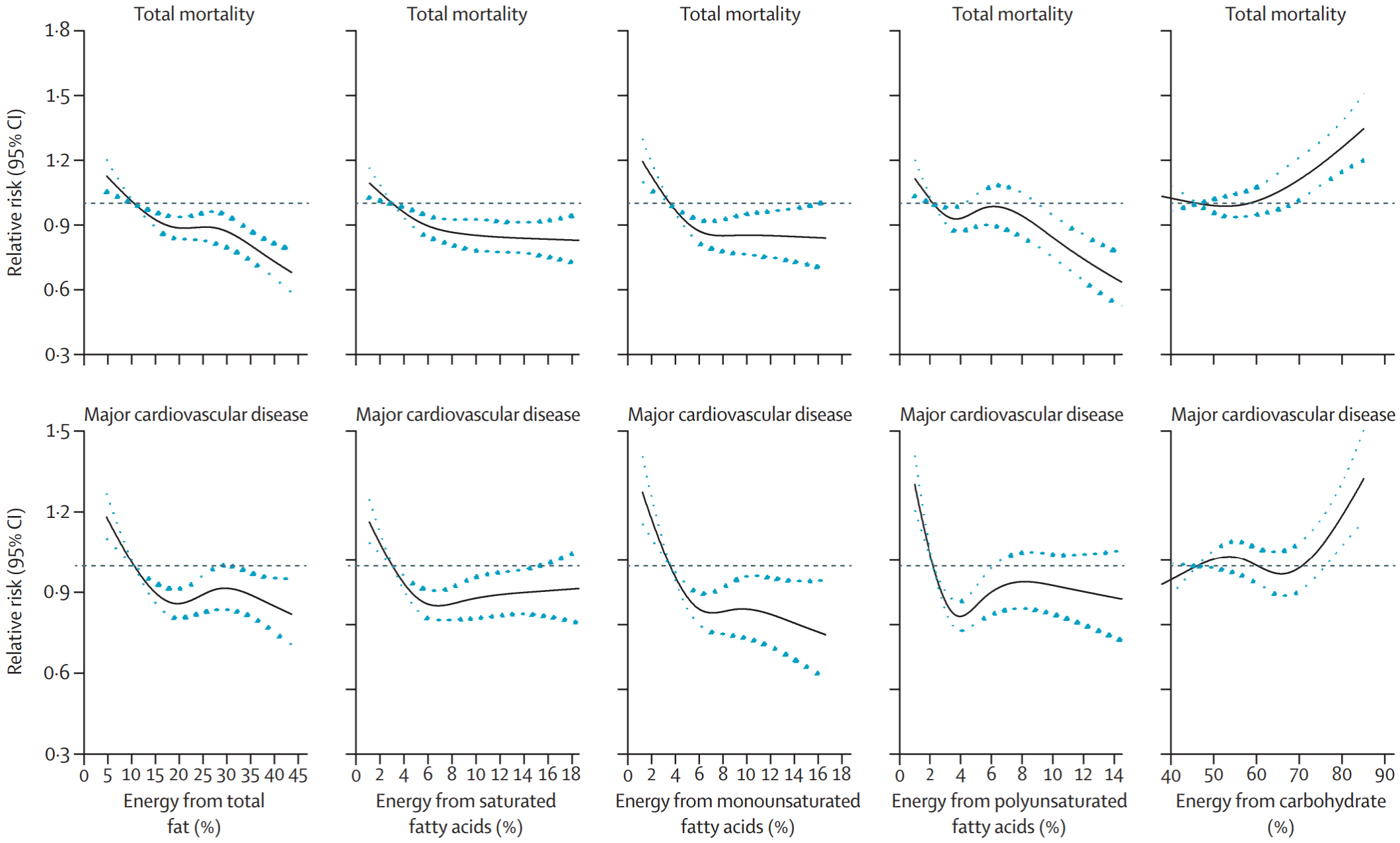
Three high-income, 11 middle-income and four low-income countries

Food frequency questionnaires at study enrolment in 135 335 individuals, median follow-up of 7·4 years

	Incidence (per 1000 person-years; 95% CI)					Hazard ratio (95% CI)				p_{trend}
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Quintile 2 *vs* quintile 1	Quintile 3 *vs* quintile 1	Quintile 4 *vs* quintile 1	Quintile 5 *vs* quintile 1	
Percentage energy from carbohydrate										
Median (IQR)	46·4% (42·6–49·0)	54·6% (52·9–56·2)	60·8% (59·3–62·3)	67·7% (65·7–69·7)	77·2% (74·4–80·7)	..	..	..	..	..
Total mortality	4·1 (3·8–4·3)	4·2 (3·9–4·5)	4·5 (4·2–4·8)	4·9 (4·6–5·2)	7·2 (6·9–7·5)	1·07 (0·96–1·20)	1·06 (0·94–1·19)	1·17 (1·03–1·32)	1·28 (1·12–1·46)	0·0001
Major cardiovascular disease	3·9 (3·6–4·2)	4·2 (3·9–4·5)	4·2 (3·9–4·5)	4·6 (4·3–4·8)	5·1 (4·8–5·4)	1·00 (0·90–1·12)	1·02 (0·91–1·14)	1·08 (0·96–1·22)	1·01 (0·88–1·15)	0·62
Myocardial infarction	2·0 (1·8–2·2)	2·2 (2·0–2·4)	2·0 (1·8–2·2)	1·8 (1·6–2·0)	2·1 (1·9–2·3)	0·93 (0·80–1·09)	0·92 (0·78–1·09)	0·99 (0·83–1·18)	0·90 (0·73–1·10)	0·40
Stroke	1·4 (1·3–1·6)	1·6 (1·4–1·7)	1·8 (1·6–2·0)	2·4 (2·2–2·6)	2·7 (2·5–2·9)	1·03 (0·86–1·22)	1·09 (0·91–1·31)	1·21 (1·01–1·45)	1·11 (0·92–1·35)	0·10
Cardiovascular disease mortality	1·3 (1·1–1·4)	1·6 (1·4–1·7)	1·4 (1·3–1·6)	1·3 (1·2–1·5)	1·7 (1·5–1·9)	1·18 (0·97–1·43)	1·02 (0·83–1·26)	1·11 (0·88–1·38)	1·13 (0·89–1·44)	0·50
Non-cardiovascular disease mortality	2·5 (2·3–2·7)	2·3 (2·1–2·5)	2·7 (2·5–2·9)	3·2 (3·0–3·5)	5·1 (4·8–5·4)	1·00 (0·87–1·15)	1·09 (0·94–1·27)	1·22 (1·05–1·42)	1·36 (1·16–1·60)	<0·0001
Percentage energy from total fat										
Median (IQR)	10·6% (8·1–12·6)	18·0% (16·3–19·7)	24·2% (22·8–25·5)	29·1% (27·9–30·3)	35·3% (33·3–38·3)	..	..	..	..	..
Total mortality	6·7 (6·4–7·0)	5·1 (4·7–5·4)	4·6 (4·3–5·0)	4·3 (4·0–4·6)	4·1 (3·9–4·4)	0·90 (0·82–0·98)	0·81 (0·73–0·90)	0·80 (0·71–0·90)	0·77 (0·67–0·87)	<0·0001
Major cardiovascular disease	5·3 (5·0–5·6)	4·3 (4·0–4·6)	4·2 (3·9–4·5)	4·0 (3·8–4·3)	4·1 (3·8–4·4)	1·01 (0·92–1·11)	1·01 (0·90–1·13)	0·95 (0·84–1·07)	0·95 (0·83–1·08)	0·33
Myocardial infarction	2·1 (1·9–2·3)	1·6 (1·4–1·8)	2·0 (1·8–2·2)	2·0 (1·8–2·2)	2·3 (2·1–2·6)	1·02 (0·87–1·20)	1·08 (0·90–1·29)	0·97 (0·80–1·18)	1·12 (0·92–1·37)	0·40
Stroke	3·0 (2·7–3·2)	2·3 (2·1–2·6)	1·6 (1·5–1·8)	1·6 (1·4–1·8)	1·3 (1·2–1·5)	1·05 (0·93–1·19)	0·91 (0·78–1·06)	0·95 (0·79–1·13)	0·82 (0·68–1·00)	0·05
Cardiovascular disease mortality	1·6 (1·4–1·8)	1·3 (1·2–1·5)	1·5 (1·3–1·6)	1·4 (1·3–1·6)	1·5 (1·3–1·7)	0·89 (0·74–1·06)	0·92 (0·75–1·12)	0·88 (0·70–1·10)	0·92 (0·72–1·16)	0·50
Non-cardiovascular disease mortality	4·7 (4·4–5·0)	3·4 (3·1–3·6)	2·9 (2·6–3·1)	2·6 (2·3–2·8)	2·3 (2·1–2·5)	0·91 (0·82–1·01)	0·78 (0·69–0·89)	0·78 (0·67–0·90)	0·70 (0·60–0·82)	<0·0001
Percentage energy from total protein										
Median (IQR)	10·8% (9·9–11·5)	13·1% (12·6–13·6)	15·0% (14·5–15·5)	16·9% (16·4–17·4)	19·7% (18·8–21·4)	..	..	..	..	..
Total mortality	8·5 (8·1–8·9)	5·4 (5·1–5·7)	3·7 (3·5–4·0)	3·2 (2·9–3·4)	3·6 (3·3–3·9)	1·05 (0·96–1·15)	0·92 (0·82–1·03)	0·85 (0·75–0·96)	0·88 (0·77–1·00)	0·0030
Major cardiovascular disease	5·0 (4·7–5·3)	4·6 (4·3–4·9)	4·4 (4·1–4·7)	4·2 (3·9–4·5)	3·7 (3·5–4·0)	1·02 (0·91–1·13)	1·08 (0·96–1·22)	1·09 (0·97–1·24)	0·96 (0·84–1·10)	0·86
Myocardial infarction	2·8 (2·5–3·0)	2·0 (1·8–2·2)	1·7 (1·5–1·9)	1·7 (1·5–1·9)	1·7 (1·5–1·9)	1·04 (0·89–1·20)	1·01 (0·85–1·20)	1·11 (0·92–1·33)	1·02 (0·83–1·24)	0·67
Stroke	1·8 (1·6–2·0)	2·2 (2·0–2·4)	2·4 (2·1–2·6)	2·1 (1·9–2·3)	1·6 (1·4–1·8)	1·01 (0·86–1·19)	1·14 (0·96–1·36)	1·11 (0·92–1·33)	0·90 (0·74–1·09)	0·47
Cardiovascular disease mortality	2·4 (2·2–2·6)	1·7 (1·5–1·9)	1·0 (0·9–1·2)	0·9 (0·8–1·1)	1·1 (0·9–1·2)	1·09 (0·93–1·29)	0·89 (0·73–1·10)	0·92 (0·74–1·16)	0·90 (0·71–1·15)	0·26
Non-cardiovascular disease mortality	5·5 (5·2–5·8)	3·3 (3·1–3·6)	2·5 (2·2–2·7)	2·0 (1·8–2·2)	2·3 (2·1–2·5)	1·02 (0·91–1·15)	0·92 (0·80–1·05)	0·79 (0·68–0·93)	0·85 (0·73–0·99)	0·0022

Hazard ratios and 95% CIs are adjusted for age, sex, education, waist-to-hip ratio, smoking, physical activity, diabetes, urban or rural location, and energy intake. Centre was also included as a random effect and frailty models were used. Major cardiovascular disease=fatal cardiovascular disease+myocardial infarction+stroke+heart failure.

Dehghan M, Swaminathan S, Iqbal R, et al. Associations of fats and carbohydrate intake with cardiovascular disease and mortality in 18 countries from five continents (PURE): a prospective cohort study. *The Lancet (British edition)*. 2017;390:2050-2062.



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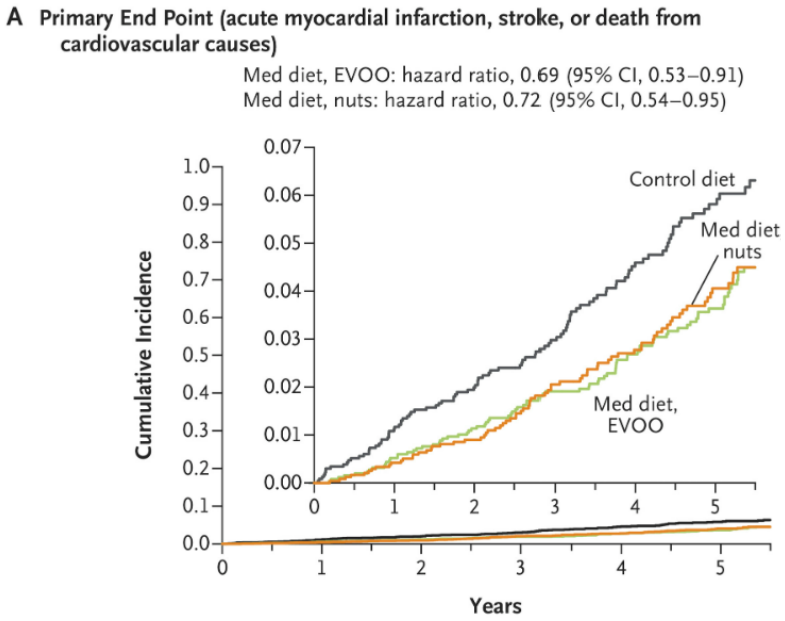
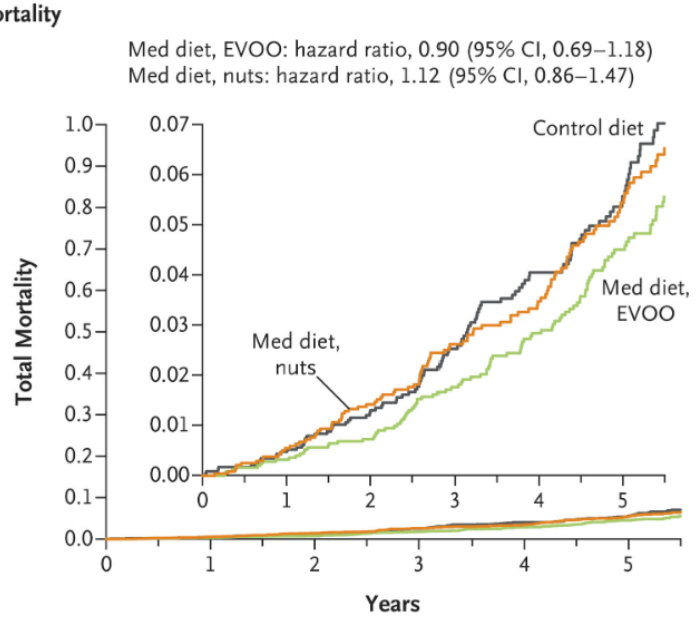
	Overall (n=135 335)	China (n=42 152)	South Asia (n=29 560)	Europe and North America (n=14 916)	South America (n=22 626)	Middle East (n=11 485)	Southeast Asia (n=10 038)	Africa (n=4558)
Age (years)	50·29 (9·92)	50·58 (9·82)	48·18 (10·24)	53·01 (9·18)	51·13 (9·69)	48·57 (9·23)	51·47 (9·96)	49·98 (10·35)
Male	56 422 (41·7%)	17 575 (41·7%)	12 887 (43·6%)	6567 (44·0%)	8685 (38·4%)	4930 (42·9%)	4323 (43·1%)	1455 (31·9%)
Urban location	71 300 (52·7%)	20 170 (47·9%)	14 224 (48·1%)	10 488 (70·3%)	12 896 (57·0%)	6526 (56·8%)	4841 (48·2%)	2155 (47·3%)
Systolic blood pressure (mm Hg)	130·9 (22·2)	132·9 (22·2)	125·8 (21·2)	132·0 (20·4)	131·7 (22·7)	127·1 (20·3)	135·2 (23·1)	138·9 (27·5)
Waist-to-hip ratio	0·87 (0·08)	0·86 (0·07)	0·87 (0·09)	0·88 (0·09)	0·890 (0·08)	0·89 (0·09)	0·83 (0·08)	0·84 (0·087)
Current smoker	28 410/134 449 (21·1%)	9588/41 670 (23·0%)	6799/29 468 (23·1%)	2256/14 888 (15·2%)	4709/22 548 (20·9%)	2178/11 485 (19·0%)	1532/9943 (15·4%)	1348/4447 (30·3%)
Education								
Pre-secondary school	57 438/134 981 (42·6%)	14 113/42 036 (33·6%)	15 135/29 432 (51·4%)	1138/14 903 (7·6%)	13 298/22 565 (58·9%)	6935/11 485 (60·4%)	4263/10 032 (42·5%)	2556/4528 (56·5%)
Secondary school	51 730/134 981 (38·3%)	21 853/42 036 (52·0%)	10 239/29 432 (34·8%)	4649/14 903 (31·2%)	5471/22 565 (24·3%)	3114/11 485 (27·1%)	4551/10 032 (45·4%)	1853/4528 (40·9%)
Post-secondary school	25 813/134 981 (19·1%)	6070/42 036 (14·4%)	4058/29 432 (13·8%)	9116/14 903 (61·2%)	3796/22 565 (16·8%)	1436/11 485 (12·5%)	1218/10 032 (12·1%)	119/4528 (2·6%)
Physical activity								
Low (<600 MET per min per week)	22 022/125 945 (17·5%)	6424/41 534 (15·5%)	5588/25 999 (21·5%)	826/13 628 (6·1%)	2889/21 567 (13·4%)	2452/11 342 (21·6%)	3315/9428 (35·2%)	528/2447 (21·6%)
Moderate (600–3000 MET per min per week)	47 850/125 945 (38·0%)	17 518/41 534 (42·2%)	8903/25 999 (34·2%)	4757/13 628 (34·9%)	6944/21 567 (32·2%)	5290/11 342 (46·6%)	3336/9428 (35·4%)	1102/2447 (45·0%)
High (>3000 MET per min per week)	56 073/125 945 (44·5%)	17 592/41 534 (42·4%)	11 508/25 999 (44·3%)	8045/13 628 (59·0%)	11 734/21 567 (54·4%)	3600/11 342 (31·7%)	2777/9428 (29·5%)	817/2447 (33·4%)
History of diabetes	9634 (7·1%)	1610 (3·8%)	2723 (9·2%)	785 (5·3%)	1530 (6·8%)	1405 (12·2%)	1351 (13·5%)	230 (5·1%)
Energy from carbohydrate (%)	61·2% (11·6)	67·0% (9·8)	65·4% (11·3)	52·4% (8·1)	57·6% (11·4)	53·5% (7·5)	53·9% (8·2)	63·3% (11·5)
Energy from fat (%)	23·5% (9·3)	17·7% (7·8)	22·7% (10·4)	30·5% (6·0)	25·2% (7·7)	30·3% (6·1)	29·2% (5·9)	22·8% (8·3)
Energy from protein (%)	15·2% (3·6)	15·3% (2·3)	11·6% (1·9)	16·7% (2·7)	17·5% (3·8)	16·9% (2·8)	17·1% (3·2)	13·4% (3·0)
Energy from saturated fatty acids (%)	8·0% (4·1)	5·7% (2·7)	8·4% (5·2)	10·9% (3·7)	8·9% (3·4)	10·2% (2·9)	9·2% (2·1)	5·9% (2·8)
Energy from monounsaturated fatty acids (%)	8·1% (3·7)	6·8% (2·9)	5·9% (3·1)	11·2% (2·6)	9·0% (3·2)	10·2% (3·0)	11·8% (3·9)	7·2% (3·2)
Energy from polyunsaturated fatty acids (%)	5·3% (3·0)	4·2% (2·8)	6·2% (4·0)	4·8% (1·3)	4·4% (1·6)	7·0% (1·9)	8·2% (2·0)	6·0% (2·9)
Energy from protein (%)	15·2% (3·6)	15·3% (2·8)	11·7% (1·9)	16·7% (2·7)	17·5% (3·8)	16·9% (2·8)	17·2% (3·2)	13·4% (3·0)
Energy from animal protein (%)	6·4% (4·5)	5·6% (3·4)	1·9% (1·9)	9·3% (3·0)	10·5% (4·9)	8·9% (3·0)	7·3% (3·1)	5·2% (3·1)
Energy from plant protein (%)	8·8% (2·2)	9·7% (1·5)	9·8% (2·1)	7·4% (2·0)	7·0% (2·3)	8·0% (1·3)	9·8% (2·2)	7·5% (1·4)

Data are mean (SD), n (%), or n/N (%). MET=metabolic equivalents.

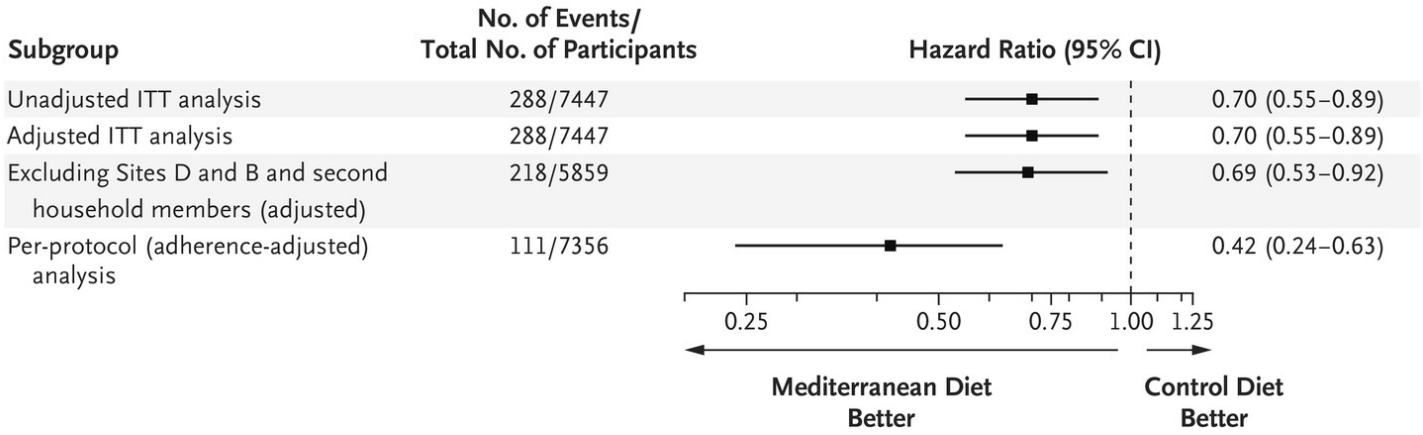
Dehghan M, Swaminathan S, Iqbal R, et al. Associations of fats and carbohydrate intake with cardiovascular disease and mortality in 18 countries from five continents (PURE): a prospective cohort study. *The Lancet (British edition)*. 2017;390:2050-2062.

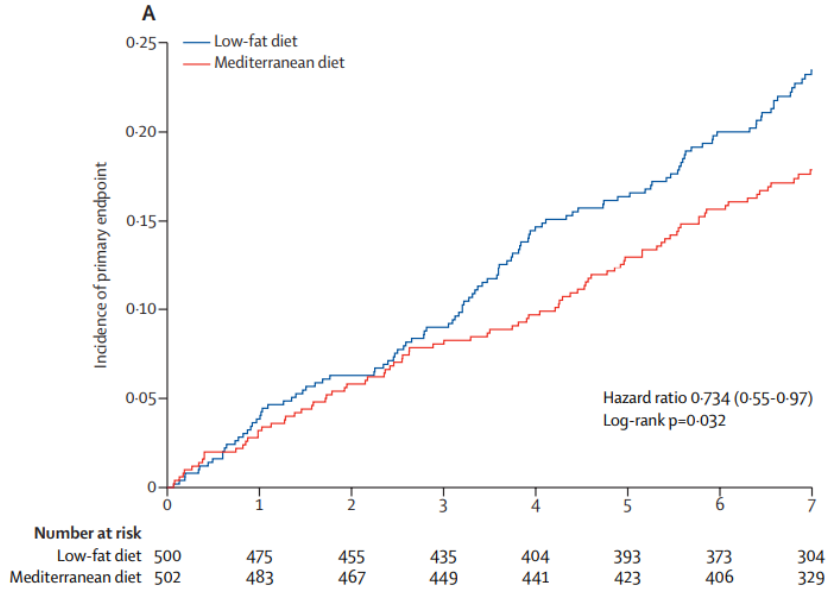


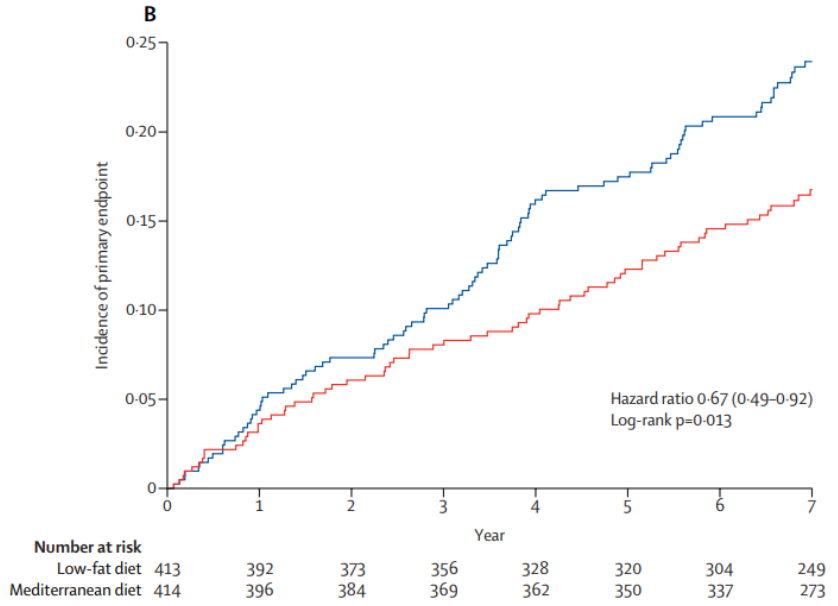


No. at Risk						
Control diet	2450	2268	2020	1583	1268	946
Med diet, EVOO	2543	2486	2320	1987	1687	1310
Med diet, nuts	2454	2343	2093	1657	1389	1031

No. at Risk						
Control diet	2450	2270	2027	1586	1272	949
Med diet, EVOO	2543	2486	2324	1991	1691	1310
Med diet, nuts	2454	2345	2097	1662	1395	1037







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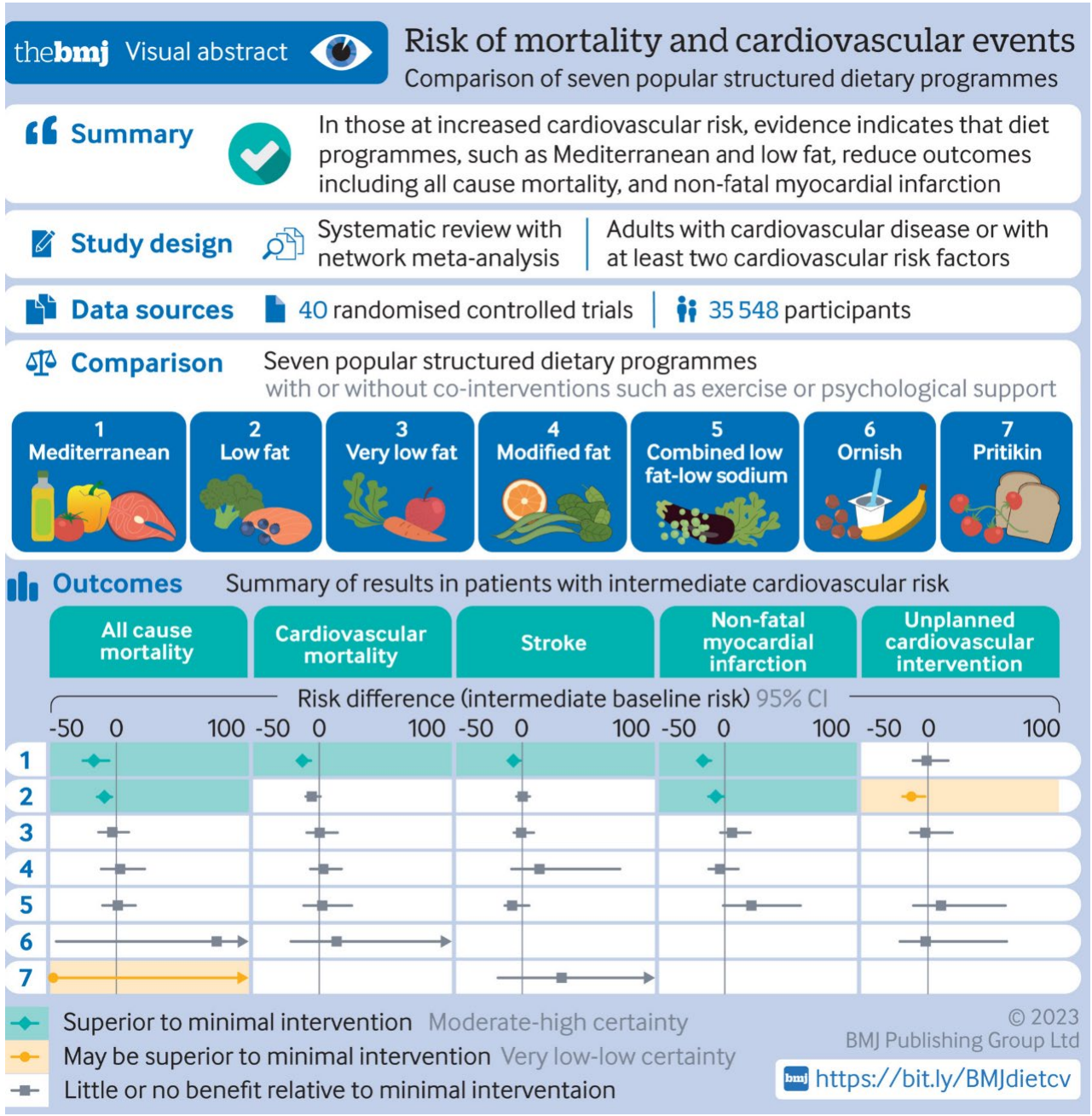
Delgado-Lista J, Alcala-Diaz JF, Torres-Peña JD, et al. Long-term secondary prevention of cardiovascular disease with a Mediterranean diet and a low-fat diet (CORDIOPREV): a randomised controlled trial. *The Lancet (British edition)*. 2022;399:1876-1885.

Named dietary programme category	Description
Low fat	Total fat intake reduced to 20-30% of caloric intake; saturated fat intake reduced to <10% of caloric intake
Very low fat	Total fat intake reduced to 10-20% of caloric intake
Combined low fat and low sodium	As in low fat diet, plus sodium reduction (<2.4 g/day)
Modified fat	No decrease in total fat intake, but increase in polyunsaturated to saturated fat ratio
Mediterranean	Increased fish, fruit, and vegetable intake; increased intake of monounsaturated fats (eg, olive oil)
Ornish	Total fat intake reduced to <10% of caloric intake; primarily plant based
Pritikin	Total carbohydrate intake 70-75% of caloric intake; total protein intake 15-20% of caloric intake; total fat intake 5-10% of caloric intake; fibre intake 40-45 g/1000 kilocalories
Minimal intervention	Usual diet or no advice, referral to own physician, usual care, non-dietary programming, or minimal dietary advice

Dietary programme *v* minimal intervention	All cause mortality	Cardiovascular mortality	Stroke	Non-fatal myocardial infarction	Unplanned cardiovascular intervention
Mediterranean	-17 (-26 to -5)	-13 (-17 to -6)	-7 (-11 to -1)	-17 (-21 to -11)	-1 (-12 to 16)
Low fat	-9 (-15 to -3)	-6 (-11 to 1)	0 (-5 to 6)	-7 (-13 to -1)	-13 (-20 to -2)
Very low fat	-3 (-14 to 10)	0 (-10 to 14)	-1 (-7 to 9)	6 (-4 to 20)	-2 (-14 to 19)
Modified fat	3 (-12 to 22)	3 (-7 to 17)	13 (-9 to 74)	-4 (-13 to 11)	NA
Combined low fat-low sodium	1 (-11 to 15)	2 (-12 to 25)	-8 (-14 to 5)	21 (-2 to 59)	10 (-12 to 59)
Ornish	76 (-46 to 553)	13 (-22 to 179)	NA	NA	-2 (-22 to 60)
Pritikin	-48 (-61 to 207)	NA	30 (-19 to 561)	NA	NA

Superior to minimal intervention with moderate to high certainty
Little or no benefit relative to minimal intervention with moderate to high certainty
Might be superior to minimal intervention with very low to low certainty
Might have little or no benefit relative to minimal intervention with very low to low certainty



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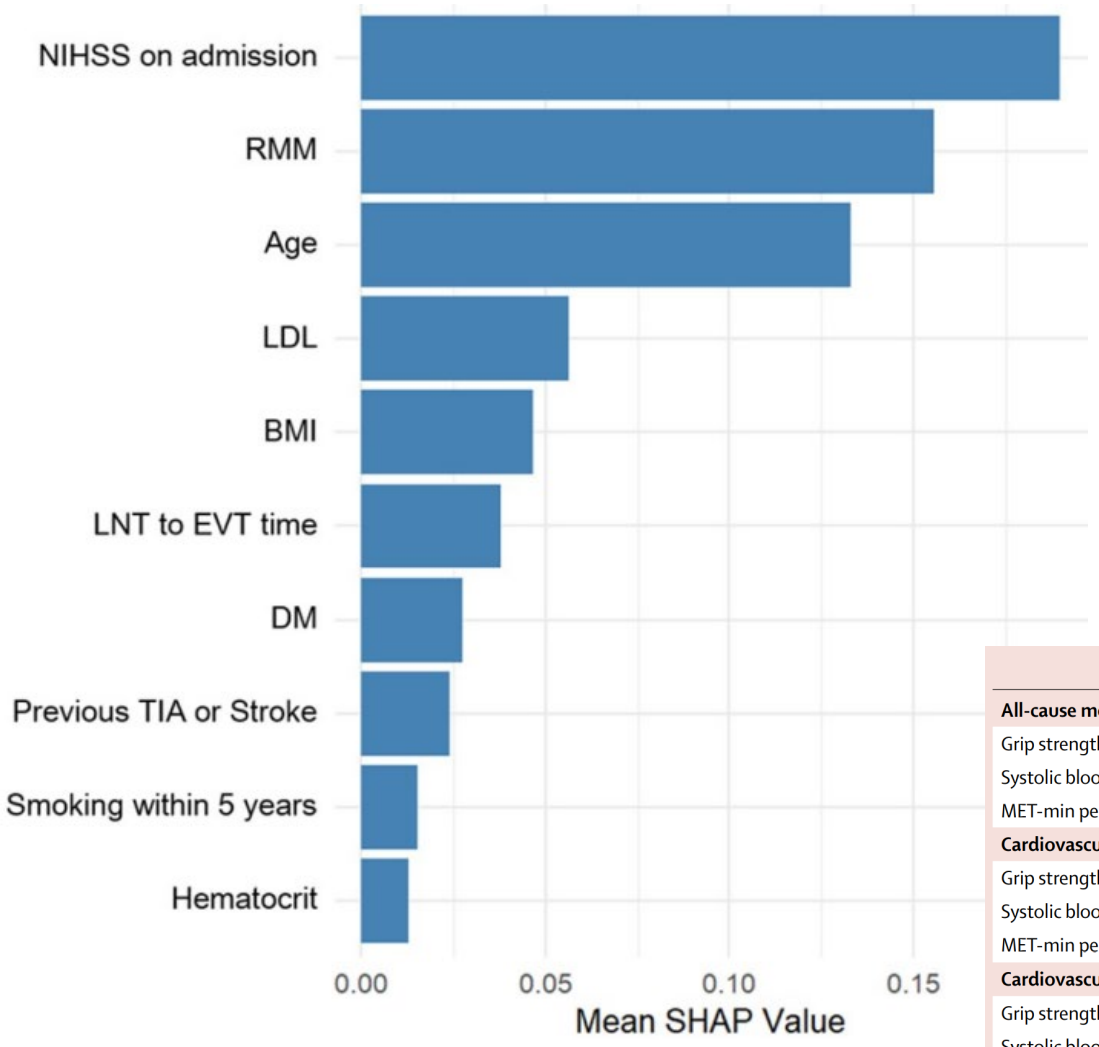
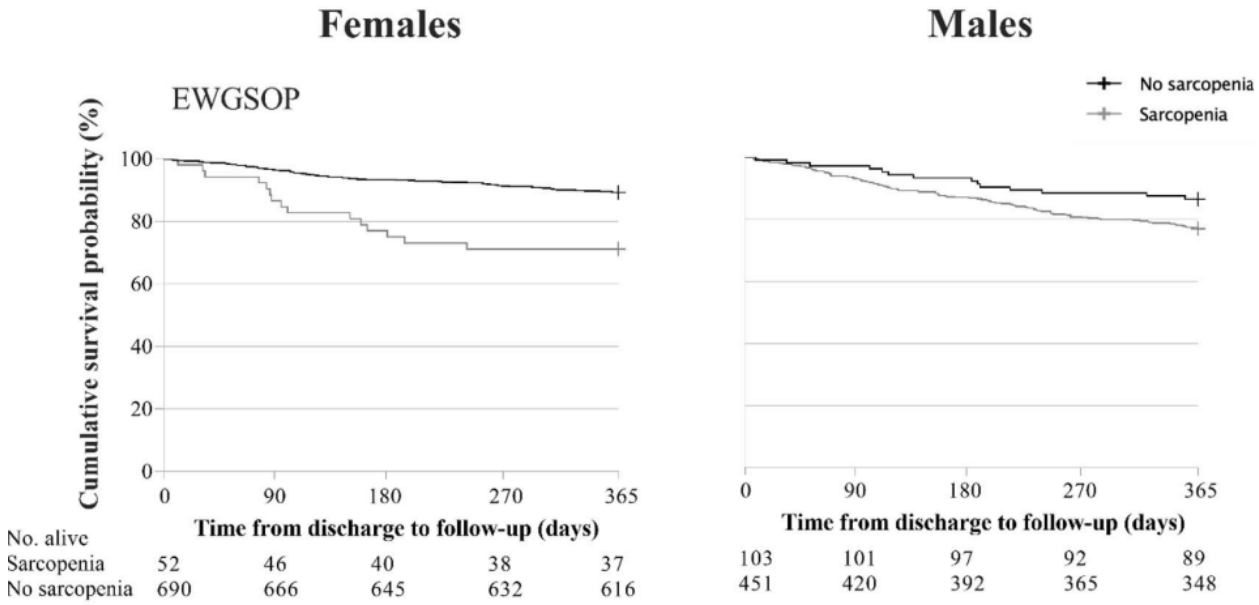
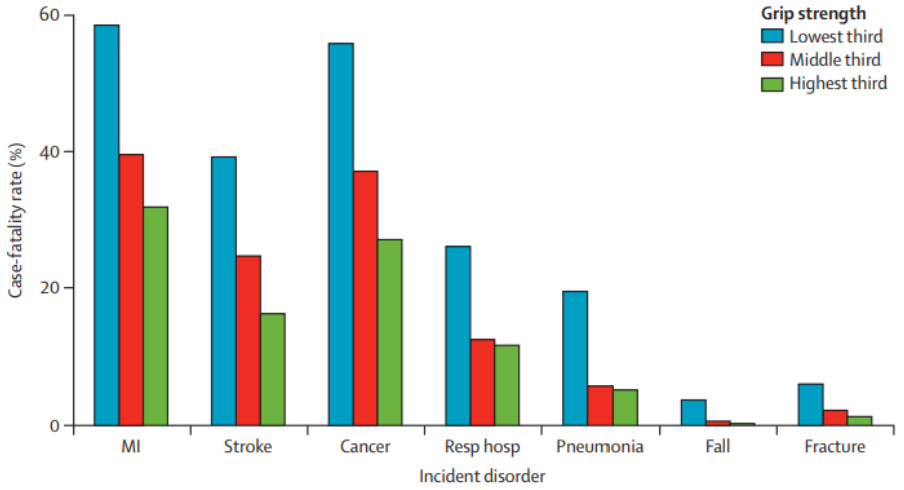




	Adjusted model
All-cause mortality	
Grip strength	1·37 (1·28–1·47); p<0·0001
Systolic blood pressure	1·15 (1·10–1·21); p<0·0001
MET-min per week	1·09 (1·04–1·15); p=0·002
Cardiovascular mortality	
Grip strength	1·45 (1·30–1·63); p<0·0001
Systolic blood pressure	1·43 (1·32–1·57); p<0·0001
MET-min per week	1·12 (1·03–1·22); p=0·01
Cardiovascular disease	
Grip strength	1·21 (1·13–1·29); p<0·0001
Systolic blood pressure	1·39 (1·32–1·47); p<0·0001
MET-min per week	1·04 (0·991–1·09); p=0·1



Kim KY, Jung S, Cho EB, et al. The impact of reduced skeletal muscle mass at stroke onset on 3-month functional outcomes in acute ischemic stroke patients. *PloS one*. 2025;20:e0313368.

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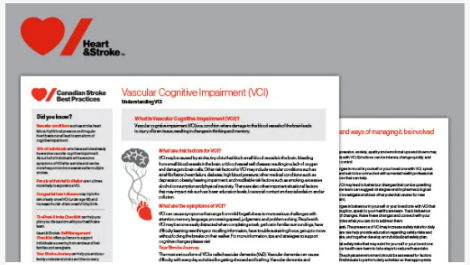
Patient & Caregiver Resources



Vascular Cognitive Impairment Infographic and Journey Map

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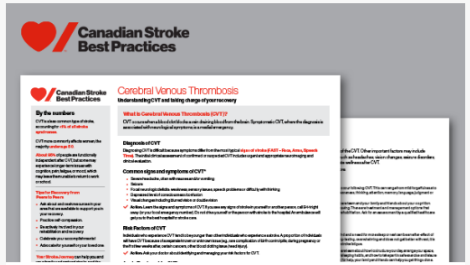

Cerebral Venous Thrombosis Infographic

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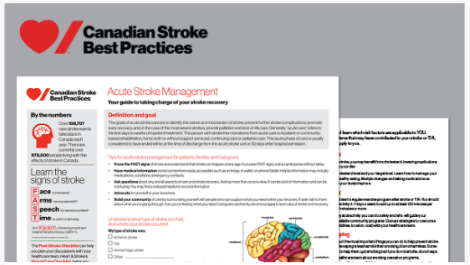

Acute Stroke Management infographic

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Canadian Stroke Best Practices

Secondary Prevention

Your guide to taking charge of your stroke recovery

By the numbers

About **1 in 20 people** who have a TIA will have a stroke within **90 days**.
(Shahjouei *et al.* 2020)

Timely initiation of secondary prevention therapies and **management strategies** can **significantly reduce** the risk of major stroke after an initial stroke or TIA.

Learn the signs of stroke

Face is it drooping?
Arms can you raise both?
Speech is it slurred or jumbled?
Time to call 9-1-1 right away.

Act F A S T. Lifesaving treatment begins the second you call 9-1-1.

For more information on this topic and to check out similar resources on stroke, visit **www.strokebestpractices.ca/resources/patient-resources**.

Definition and goal

Secondary prevention aims to reduce the risk of another stroke or TIA. It is a collaborative process between someone who has had a stroke and their healthcare providers. The recommendations promote aggressive management of risk factors for stroke, to help increase survival and quality of life. This may include lifestyle changes and modifications, and management of underlying medical conditions. Secondary prevention can be addressed in many settings including the hospital, with your primary care provider, and stroke prevention services, in person or virtually. It should occur throughout your recovery journey and is life-long.

Ischemic stroke is caused by a blockage or clot in a blood vessel in your brain. The interrupted blood flow can cause brain cells to die leading to injury to the brain. About 85% of strokes are ischemic.

A **Transient Ischemic Attack (TIA)**, often called a 'mini stroke', is caused by a small clot that briefly blocks an artery. TIA and minor ischemic stroke fall along a continuum. TIA symptoms fully resolve within 24 hours (usually within one hour). If any symptoms still exist after 24 hours, then it would be considered a stroke, not a TIA. A TIA event is significant as it can be a warning of a future stroke. They are a medical emergency. Call 9-1-1 or your local emergency number immediately, do not wait.

Hemorrhagic stroke: A stroke caused by the rupture of a blood vessel within the brain. The interrupted blood flow can cause brain cells to die leading to injury to the brain.

After a stroke or TIA your chances of having another are higher. People with stroke also have a higher risk of cognitive issues or vascular dementia. Prevention is key. Know the FAST **signs of stroke**. Some people may experience other symptoms such as: vision changes, sudden severe headache, problems with balance and numbness however, these symptoms can be caused by many other conditions as well.

Be prepared to **act quickly** by calling 9-11 or your local emergency medical services if you experience any stroke signs.

Important: Identify you risk factors

Together you and your healthcare team will create a personalized plan of action that you can follow to control some of your risk factors. This plan might include a combination of lifestyle changes such as quitting smoking and increasing physical activity and taking medication for high blood pressure and blood thinners to prevent clots. You should discuss challenges you might have and plan ways to address them.

Medical Risk Factors: some medical conditions can increase your risk of stroke (such as high blood pressure, high cholesterol, diabetes, atrial fibrillation, carotid artery blockages, pregnancy, some heart issues)

Modifiable risk factors: many risk factors can be managed through lifestyle changes, treatment, and medications. These include diet, sodium intake, activity levels, unhealthy weight, smoking and vaping, heavy or binge drinking, recreational drug use, and use of oral contraceptives or hormone replacement therapy.

Non-modifiable risk factors: There are other factors associated with a higher risk of stroke that you cannot control. These include:

- Age (risk increases with age)
- Sex (risk increases after menopause)
- Family history of heart disease, stroke, or TIA (parents or siblings)
- Previous stroke or TIA
- Indigenous heritage
- South Asian or African descent
- Social determinants of health

The **Post-Stroke Checklist** can help you plan your discussions with your healthcare team. Heart & Stroke's **Virtual Care Checklist** helps you prepare for your virtual follow up appointments. Visit Heart & Stroke **Risk and Prevention**.

Canadian Stroke Best Practices

Enabling self-management following stroke:

A checklist for patients, families, and caregivers

Activities of Daily Living

- ❑ Try to be as independent as possible with daily tasks such as brushing your teeth, getting dressed and using your computer.
- ❑ Use suggested equipment to improve safety and maximize independence wherever possible (e.g., bars/seat for shower, raised seat/bars for toilet, walking aid, if required).
- ❑ Try to participate in household tasks or portions of tasks as much as possible including meal preparation tasks, writing out a grocery list, folding the laundry, using the phone.

Leisure

- ❑ Continue to make time for leisure activities – do something that you enjoy every day.
- ❑ Consider completing leisure activities with others to increase motivation (e.g., online yoga classes, taking short walks with a friend, playing cards).
- ❑ Break down leisure activities into smaller component parts and practice those first (e.g., if returning to golfing, practice holding and using a putter before a heavier/longer club).

Arm and Leg Use

- ❑ Move and use your affected arm and leg many times every day to help your brain make new connections and to promote motor recovery; follow strengthening exercises and activities prescribed by your therapist.
- ❑ Use your affected arm and hand every day for as many tasks or portions of tasks that you safely can (e.g., hold cutlery to eat, help fold laundry, hold phone, turn on TV, use computer). Many repetitions are required every day.
- ❑ Complete hand coordination tasks as able, e.g., sort coins, pick up small objects, fasten buttons, flip cards.
- ❑ Consider other ways to work on your arm and leg at home including visualization of movements (mental imagery) and mirror box therapy. See the Stroke Engine and Heart and Stroke websites for additional information on these and other interventions.
  - Heart and Stroke: Stroke Recovery and Support, physical changes – Arms and Legs
  - Stroke Engine: Mirror Therapy – Lower Extremity and Upper Extremity
  - Stroke Engine: Motor Imagery/Mental Practice
- ❑ For more information, visit the Heart and Stroke Rehabilitation and Recovery Infographic

Questions?