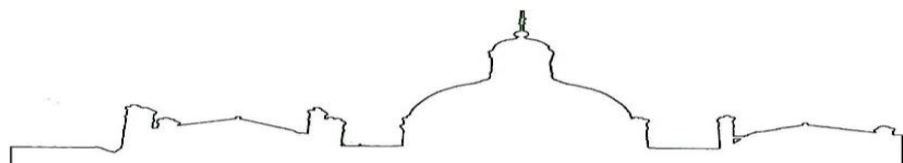


“40 ans d’angioplastie: tout et son contraire”

La voie radiale: le gold standard?

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Background

- Access site **haemostasis more predictable**, but the procedure itself “**technically demanding**”
- **Diverging benefit** in reducing adverse outcomes in ACS patients
- Avoiding access site bleeding and vascular complications using TRI **improves outcomes in unselected ACS?**

Reasons for adoption of radial

- Patient preference (comfort)
- Shortens hospitalization (day case PCI program)
- “New” technical aspects of PCI, widely applicable
- Reduces major bleeding and all cause mortality
- Cost = 0

Reasons for non-adoption of radial

- Lack of teachers
- Learning curve
- Spasm (nitrates/calcium blockers)
- Tortuosities (technical skills and tricks)
- Occlusion (anticoagulation + 5/6F catheters)

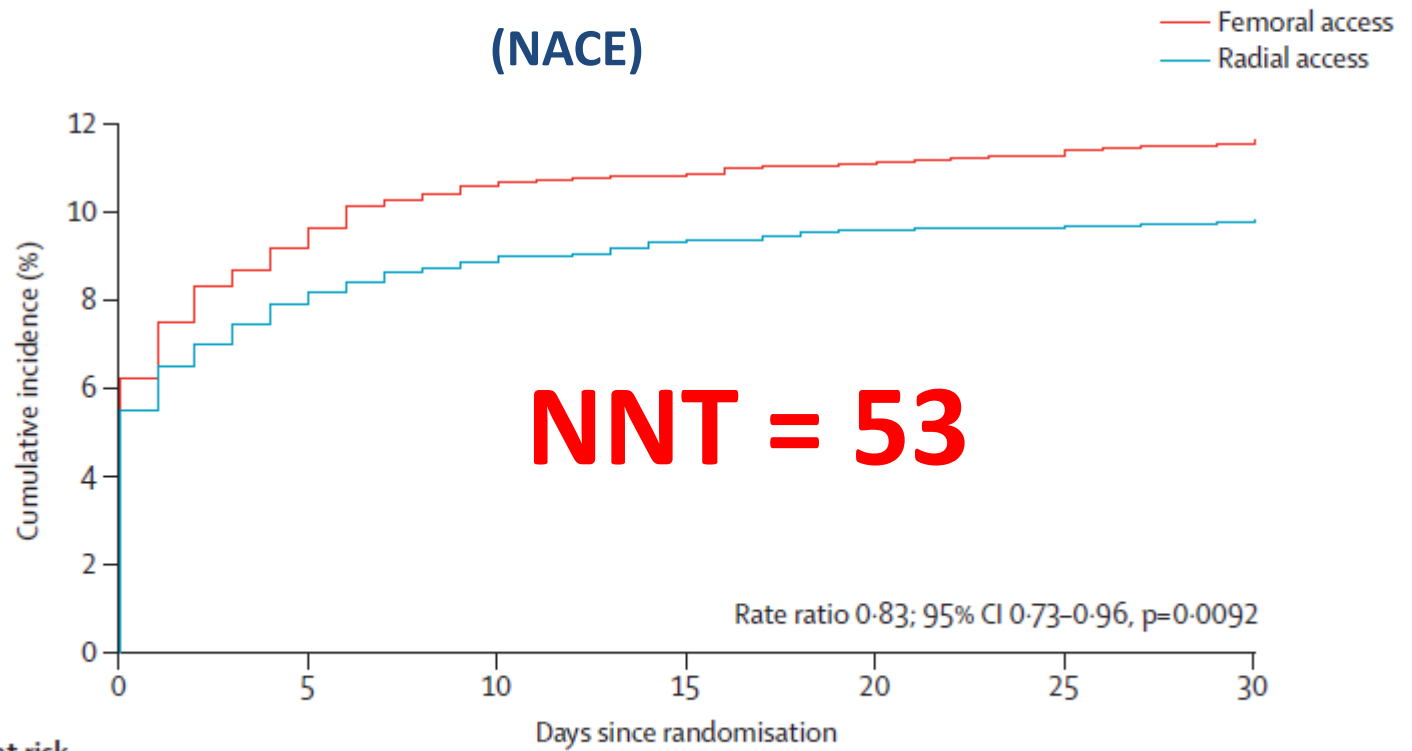
Guidelines and evidences

2015 NSTEMI guidelines

<i>Vascular access and stent type</i>			
Radial over femoral access is recommended for coronary angiography and PCI.	I	A	251
The use of new-generation DES over BMS should be considered among patients requiring OAC.	IIa	B	245, 252

MATRIX

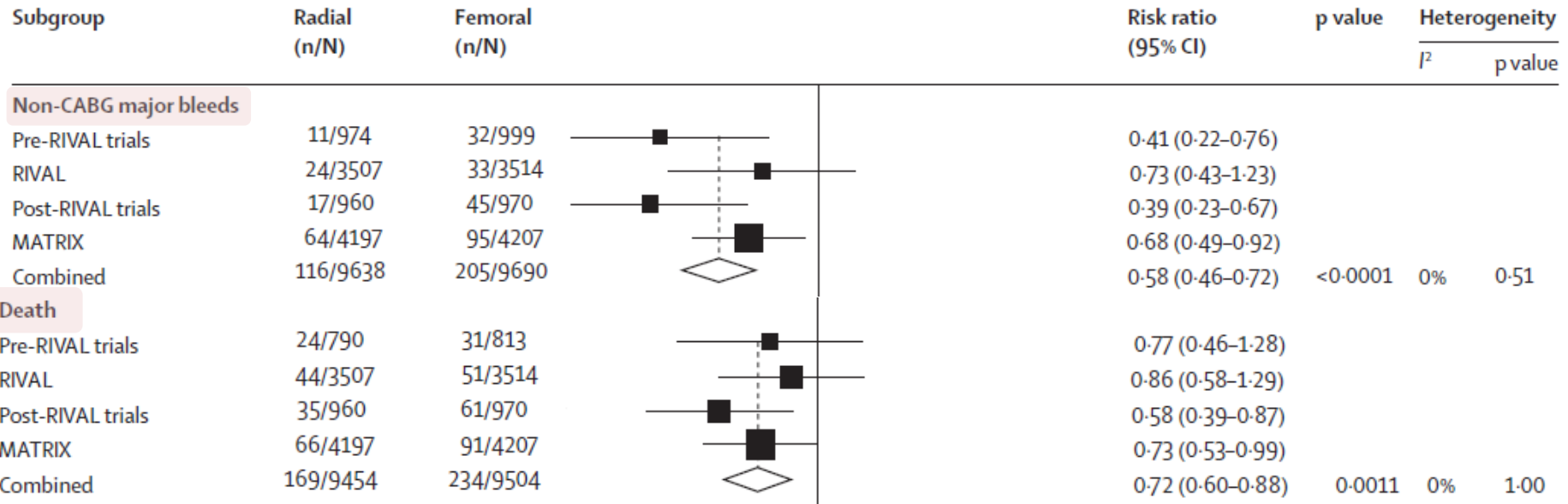
(NACE)



Number at risk

	0	5	10	15	20	25	30
Femoral access	4207	3809	3749	3739	3727	3720	3709
Radial access	4197	3857	3813	3794	3782	3780	3772

META-ANALYSIS

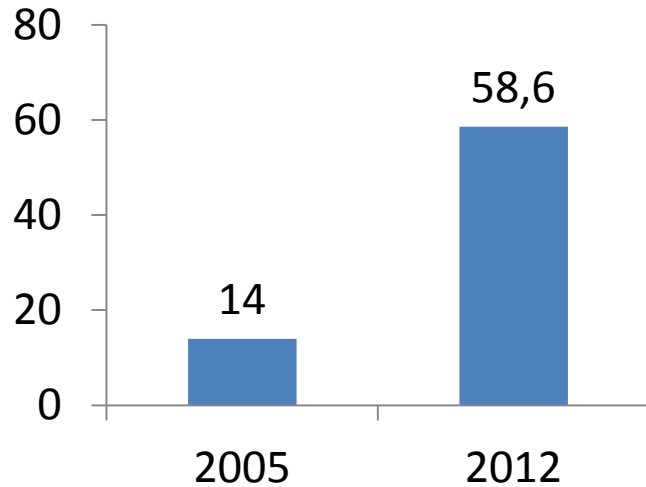


Implementation in the real world

British Cardiovascular Intervention Society database (2005-2012) (n=448 853)

- OR 0.70; 95% CI 0.66–0.74 for death
- 450 lives saved + 264 additional lives if TRA adoption was uniform

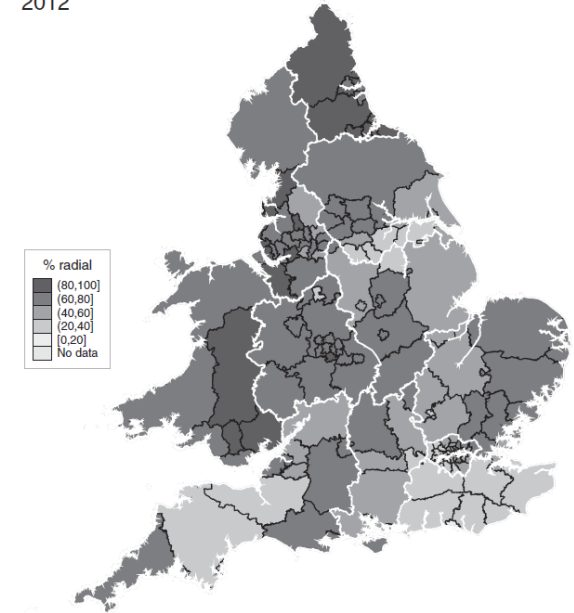
TRA



A
2005

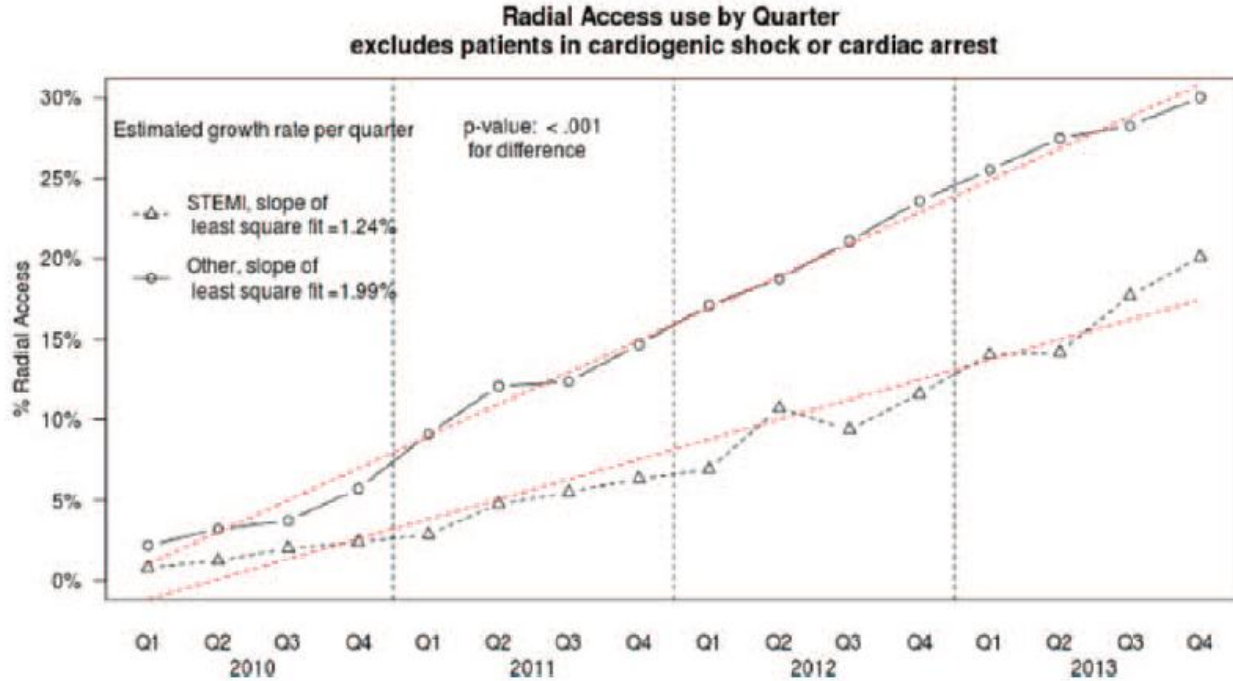


2012



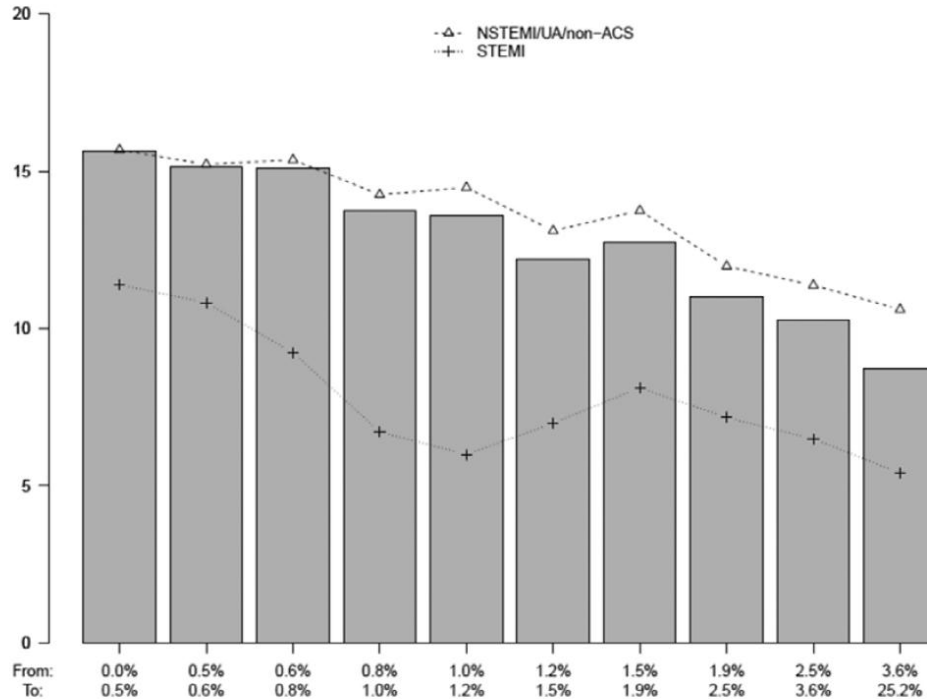
A slow take-off

Blue Cross Blue Shield of Michigan Cardiovascular Consortium database



17912 (14%) out of 122728 were TRA-PCI

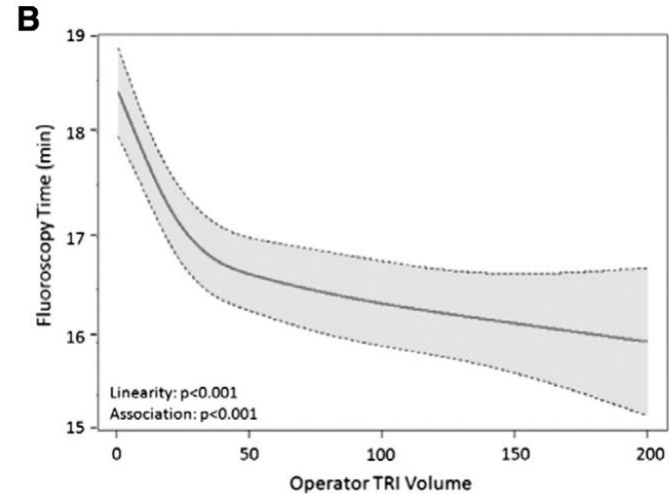
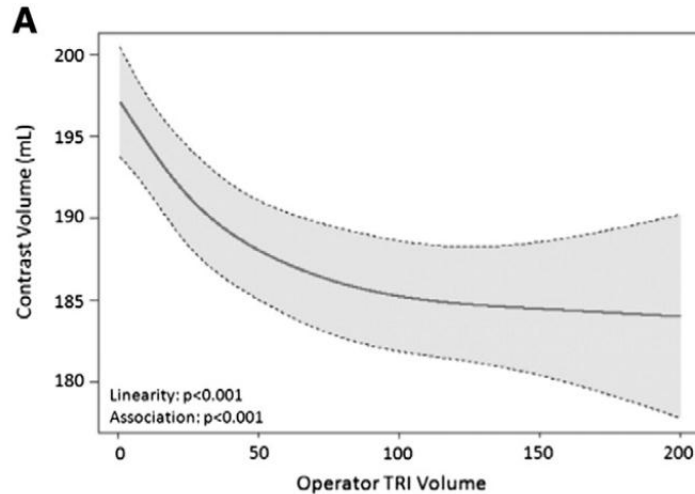
Negative association between the bleeding risk and the use of TRA



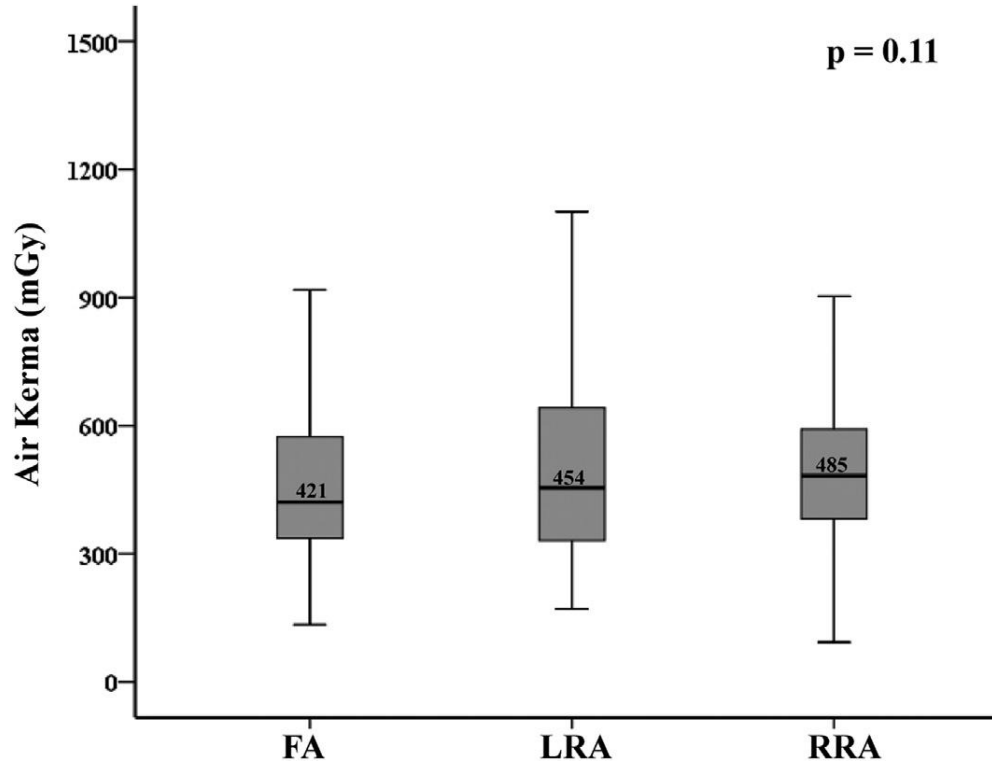
Limitations

Learning curves

	<80	>80
Access failure (%)	14	2
Sheath insertion time (min)	10±2	2,8±2,5
Procedure time (min)	25,7±12,9	17,5±4,7



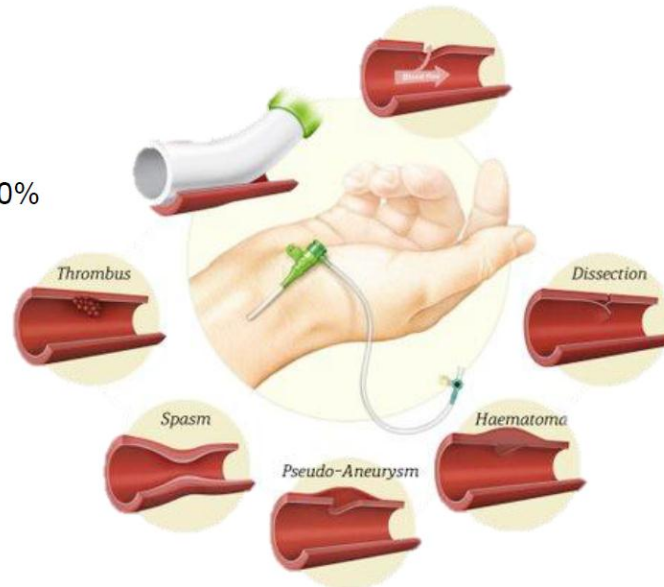
Radiation exposure



Vascular complications

Radial Occlusion

Ranging from 0.8% to 30.0%



Compartment Syndrome

Rare complication

Le bilan

Table 3 – Summary of outcomes and time metrics from RCTs comparing transradial and transfemoral primary PCI.

Study	Total N (Radial N)	Death	Major Bleeding (R vs. F)	Crossover Rate (%) (R vs. F)	D2BT (min) (R vs. F)	Procedure Time (min) (R vs. F)
TEMPURA ²⁶	149 (77)	4 vs. 6	0 vs. 2	0 vs. 1.5	Not reported	44 vs. 51
RADIAL-AMI ²⁷	50 (25)	0 vs. 1	0 vs. 0	4 vs. 0	Not reported	32 vs. 26
FARMI ²⁸	114 (57)	3 vs. 3	3 vs. 3	12.3 vs. 1.8	Not reported	28 vs. 26
Li et al. ²⁹	370 (184)	Not reported	Not reported	1.6 vs. 1.1	Not reported	56.2 vs 54.8
Yan et al. ³⁰	103 (57)	3 vs. 3	0 vs. 1	1.8 vs. 0	16.2 vs. 15.4	44.1 vs. 41.2
RADIAMI ³¹	100 (50)	0 vs. 1	3 vs. 7	2 vs. 2	76.8 vs. 64.6	58.3 vs. 55.1
Gan et al. ³²	195 (90)	2 vs. 3	0 vs. 2	Not reported	Not reported	29.75 vs. 27.89
Hou et al. ³³	200 (100)	4 vs. 5	0 vs. 3	4 vs. 0	Not reported	37.2 vs. 35.7
RADIAMI II ³⁴	108 (49)	0 vs. 0	4 vs. 6	0 vs. 0	67.4 vs. 57.5	53.7 vs. 47.3
RIVAL ¹⁴	1958 (955)	12 vs. 32	8 vs 9	5.3 vs. 1.6	Not reported	35 vs. 34
RIFLE-STEACS ¹²	1001 (500)	26 vs. 46	9 vs. 14	9.6 vs. 2.8	60 vs. 53	Not reported
MATRIX ¹³	8404 (4197)	66 vs. 91	26 vs. 37	5.7 vs. 2.2	Not reported	Not reported

It is a revolution

- No cost
- Routine
- Education
- Clinical benefit
- Little side effect

Conclusion

Real progress happens only when advantages of a new technology become available to everybody”

Henry Ford