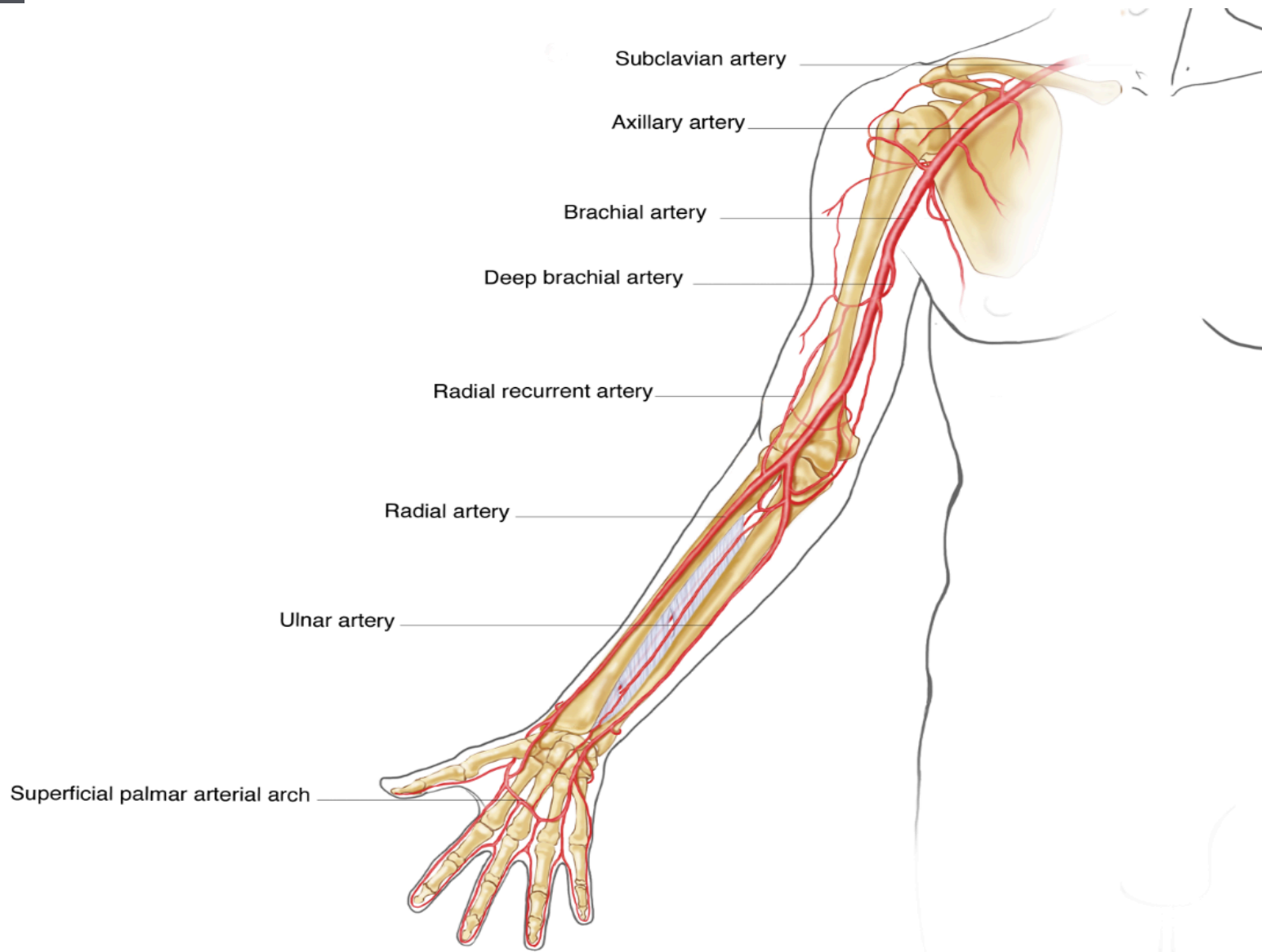




Anatomical radial variations

1533 patients	Normal anatomy	High bifurcations	Radial loops	Radial tortuosities	Other anomalies
No. of patients	1321 (86%)	108 (7%)	35 (2.3%)	30 (2%)	39 (2.5%)
Failure rate %	0.9	4.6	37.1	23.3	12.9%

Lo, Heart 2009; 95: 410-5





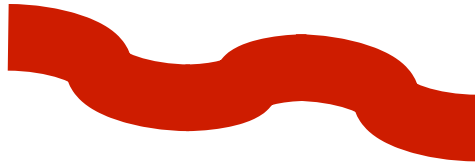
Anatomical radial variations



Stenosis



Spasm



Tortuosity



Loop



Small branch



If resistance, what to do?

Never force +++

Inject dye to understand the anatomy and cause of the issue

Take an hydrophilic J wire or PCI wire

Follow under fluoroscopy wire or catheter progression

Vasodilator

Verapamil: 2.5mg

Nitro: 100µg

Diltiazem: 5mg

UHF

Diagnostic: 50 UI/kg

PCI: 70-100 UI/kg



Spasm management

PREVENTION:

A good cocktail: Verapamil
+/- nitrates or diltiazem

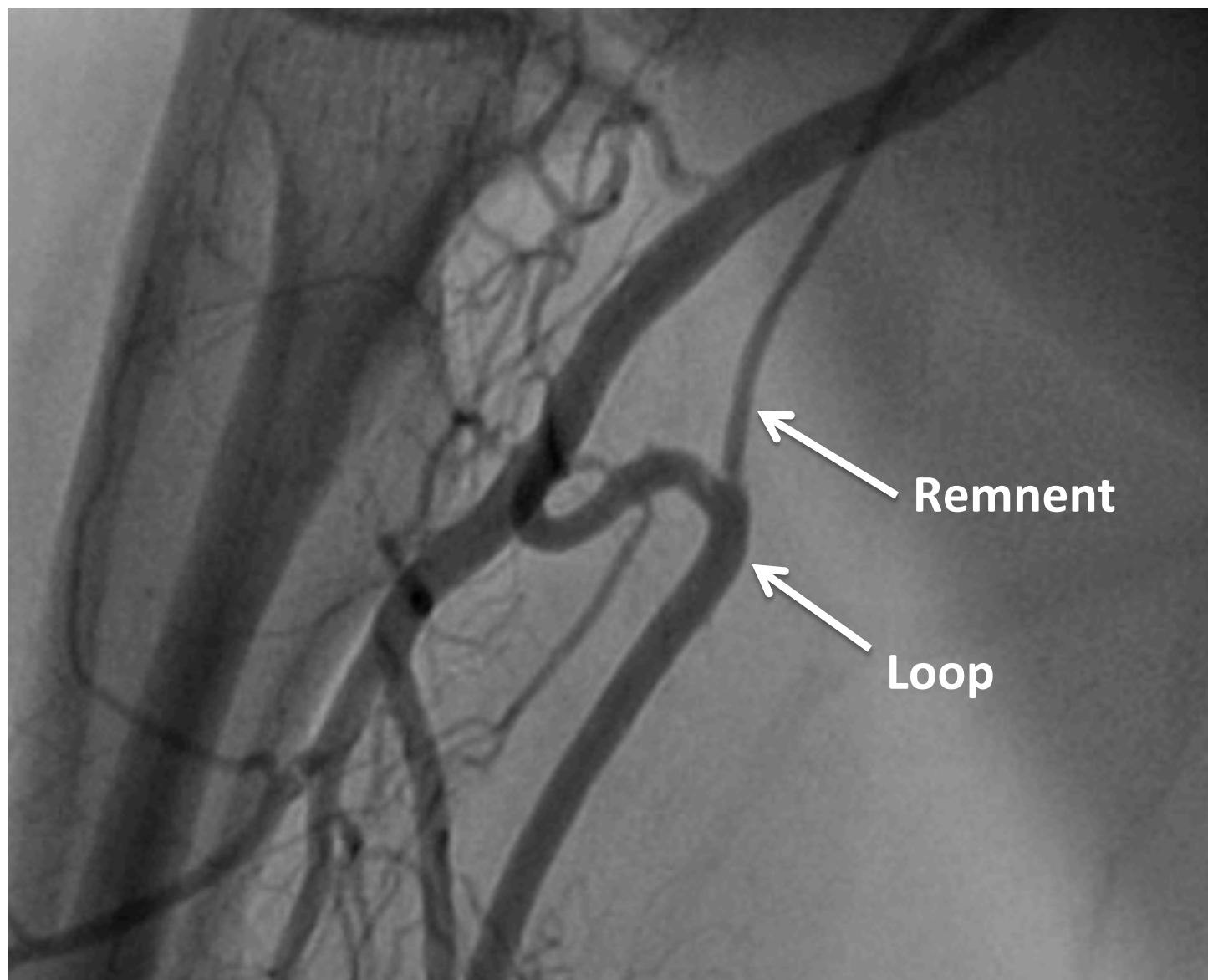
No pain: Emla[®], Xylocaine...

Long hydrophilic sheath

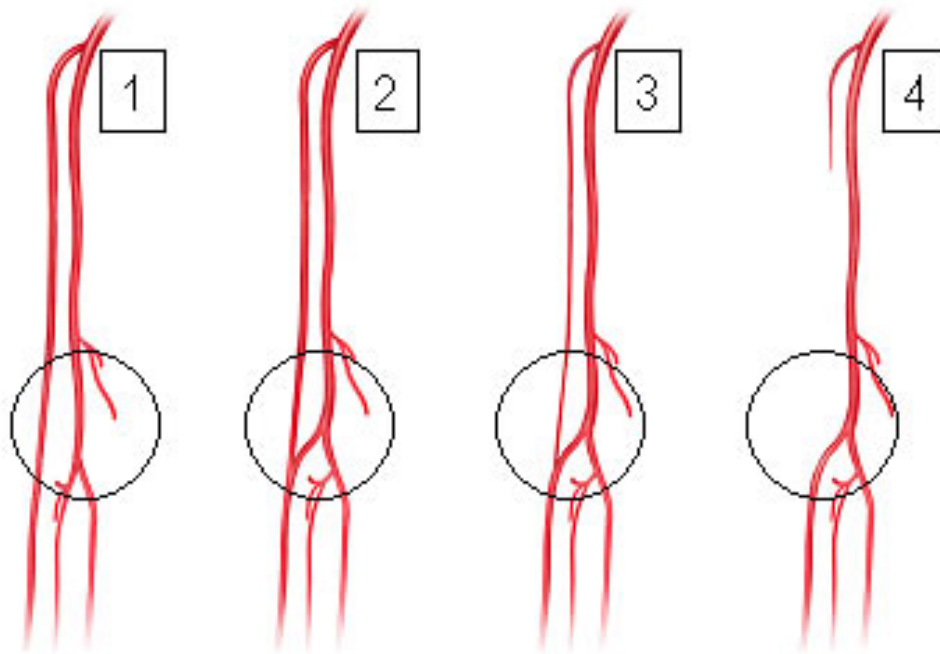
TREATMENT:

Vasodilator

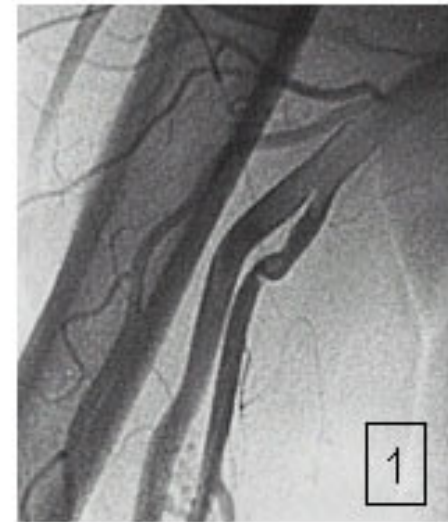
Sedation



High take-off of radial artery



4 varieties





How to straighten a loop?

Cross the loop with floppy wire

Cross the loop with 5F JR4 catheter

Advance a 0.035'' wire

Pull back the catheter



Perforation resolution

Immediate outer compression

Heparin neutralisation and shift to another vascular access

OR

Cross the lesion with a 0.014'' wire and inner catheter compression



Radial navigation - summary

Anatomical variations in 14% of cases

Check with dye to understand

Use hydrophilic or 0.014'' wire to cross

Know your limits

Keep safety in mind: never force to avoid perforation or dissection