

Mechanical Thrombectomy

Jennifer Corns

Limitations of Thrombolysis

- Up to 77% present after 4.5 hrs – too late!
- Contra-indications prevent tPA – bleeding risks
- London average-14% of all strokes thrombolysed
- Large vessel Occlusion is primary reason for non response
- Internal Carotid Artery, MCA, BA in up to 35-40% of ischemic stroke



Thrombectomy!



- October 2014 evidence that mechanical thrombectomy +/- thrombolysis is superior to thrombolysis alone
- 15% improve no treatment
- 30% improve thrombolysis
- 48% improve with stent retrieval +/- thrombolysis

Thrombectomy

- What is it??

Using a device to mechanically remove a clot from a blood vessel in the brain in order to restore blood flow

- Who does it?

An interventional Neuroradiologist- a Doctor who performs minimally invasive interventional treatment on conditions of the head, neck or spine under x-ray or CT guidance

- Where is it done?

In the Interventional Neuroradiology Suite (INR suite), 2nd floor, Atkinson Morley Wing (opposite Brodie Ward)

Evidence

- **Mr Clean**- within 6 hours= 13.5% ↑ in functional independence. No ↑ in bleeding/death
- **Escape**- pts who couldn't have IV thrombolysis still benefit
- **Extend**- within 8 hours 31% ↑ in functional independence
- **Swift Prime**- ED-groin= 90 minutes- 25% more favourable outcome
- **Revascat**- within 8 hours= 15% ↑ functional independence

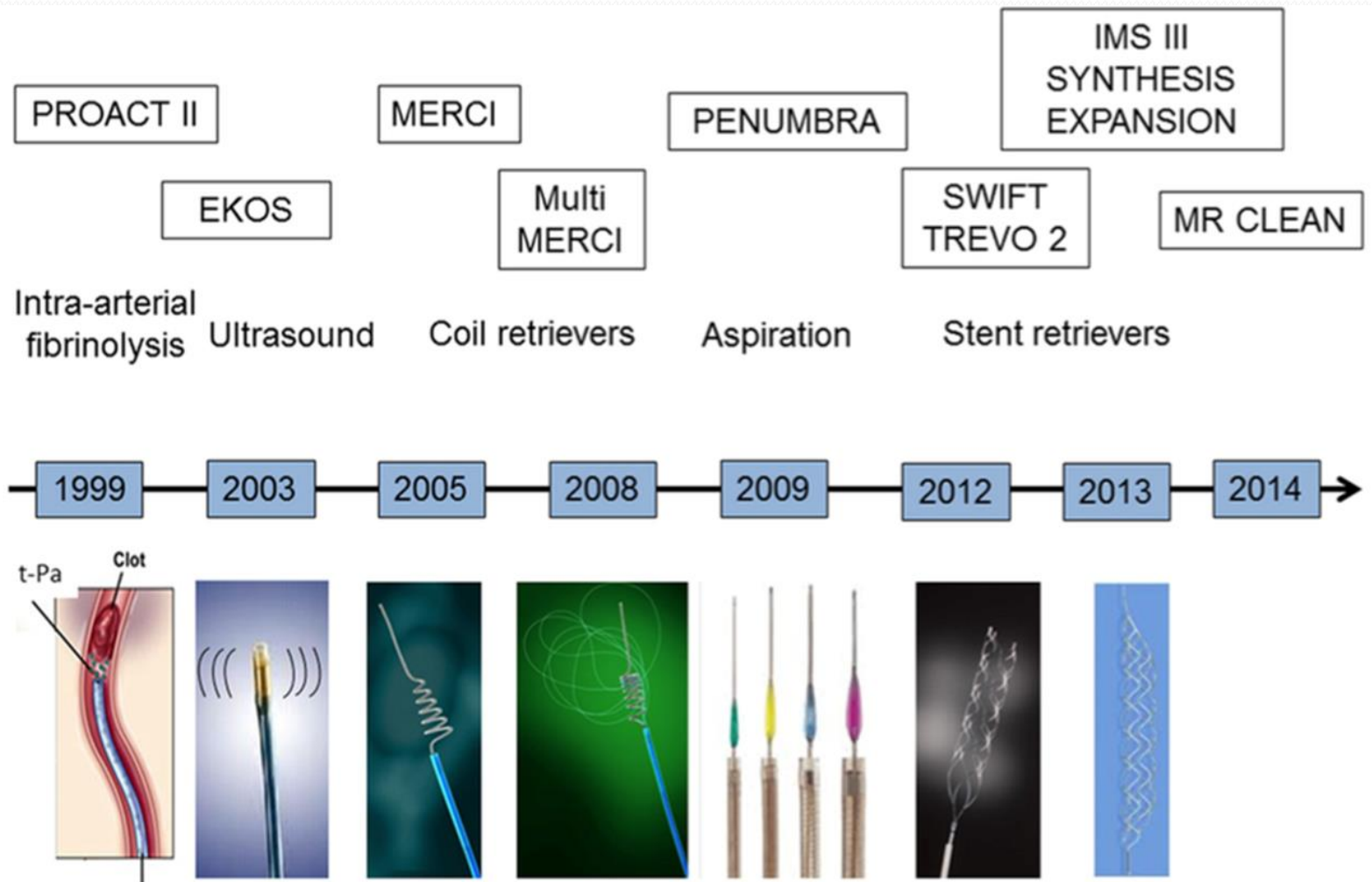
Evidence

HERMES 2015

- Combines individual patient data from five trials of endovascular mechanical thrombectomy
- 1287 patients (634 assigned to mechanical thrombectomy, 653 assigned to standard care)
- For every hour, 10% fewer people will be functionally independent

Baseline mRS	Outcome mRS	No. to treat
0	0-2	5.1
2	0-2	19

The evolution of Thrombectomy





- Took part in trialling thrombectomy treatment
- 1st in the Country to deliver 24/7 service!
- March 2015- 1st patient flown in from an external trust for thrombectomy
- Take patients from South West London, Surrey and Kent.
- 20% of these over night



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WEST END FINAL

STROKE PATIENTS 'BROUGHT TO LIFE'

REVOLUTIONARY
NEW TREATMENT AT
LONDON HOSPITAL

GIRL RECOVERS ON
OPERATING TABLE
AND CAN SPEAK AGAIN

EXCLUSIVE

Ross Lydall Health Editor

CRITICALLY ill patients left paralysed by strokes are being "brought back to life" on the operating table by a ground-breaking rapid response treatment at a London hospital. Doctors revealed to the Standard that people left unconscious or unable to speak or move by major strokes are making dramatic – sometimes almost instant – recoveries due to the first 24/7 UK centre offering a revolutionary procedure. Experts say that getting the time-critical treatment within hours after a stroke can be the difference between a full recovery and serious disability or even death.

A girl of 17 was the first to receive the new "gold standard" out-of-hours care at St George's Hospital, Tooting, after being rushed late at night from Surrey when conventional clot busting drugs failed to work.

She was unable to speak or move one side of her body – but suddenly recovered on the operating table when doctors fed a 38-long catheter wire through her groin to "fish out" life-threatening blood clots in her brain.

Consultant neurologist Dr Bhavini Patel said: "The whole of her right side had no power. She was mute. As soon as the



Challengers: Donald Trump has refused to commit to accepting the US Presidential election result if he loses. His Democratic rival Hillary Clinton, seen with him after their first TV debate today, described his stance as "horrifying" REPORT: Pages 10 & 11

TRUMP: I COULD REJECT RESULT

Inside

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for visa
deal for
skilled staff
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Hero wife
Tube thug
was rude
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Sport

England
fight back
after top
order fails
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The price of salmon is going up and up but my hard-earned savings are stagnant. Despite my discipline, my money's going nowhere, fast!!



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The bear facts: As with all investments, the value of your portfolio can go down as well as up. ISA rules apply.

News > Health

Girl 'brought back to life' by revolutionary new stroke treatment at London hospital

ROSS LYDALL | Thursday 20 October 2016 11:41 |  0 comments



 News > Midlands News > NHS

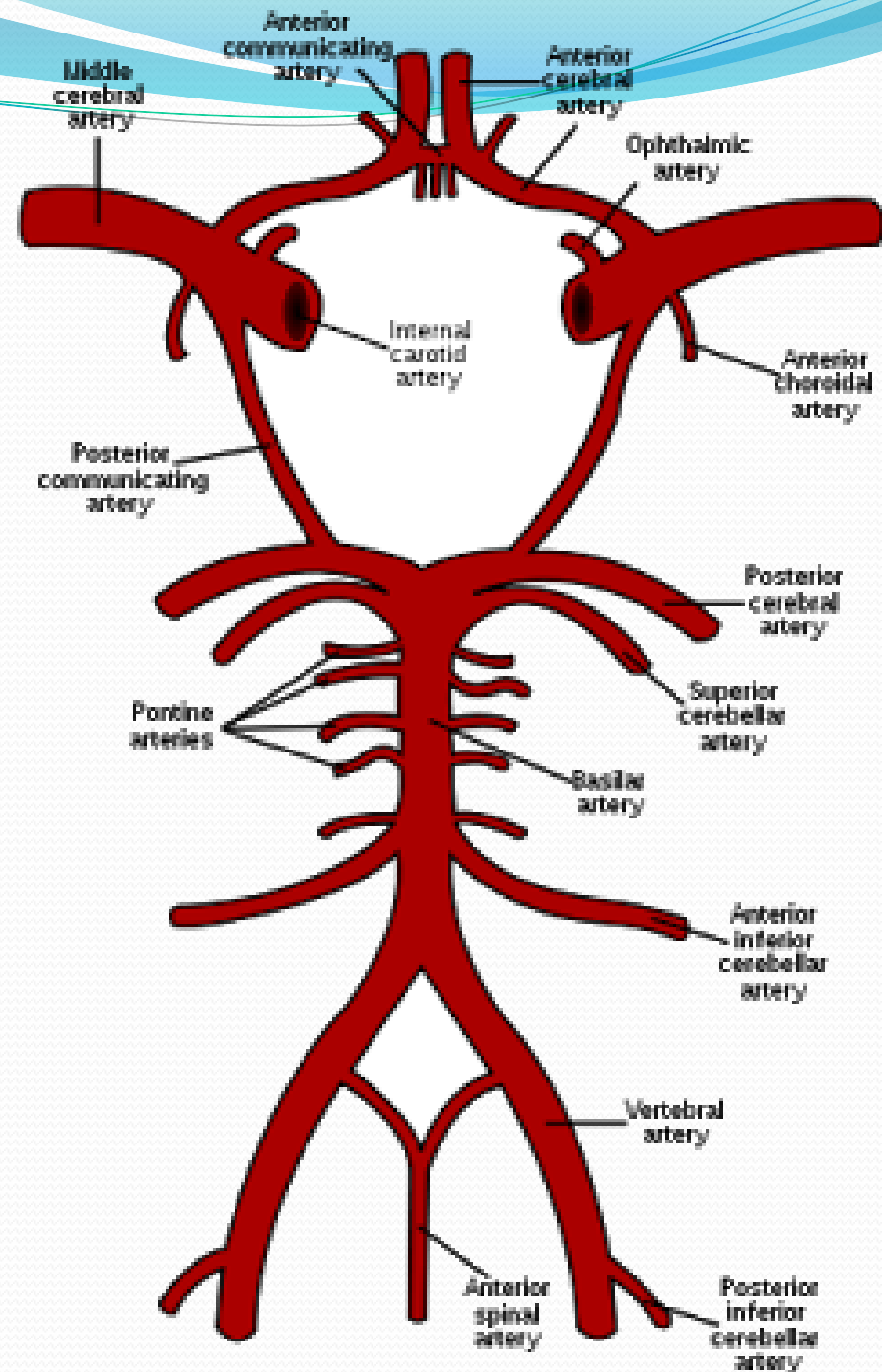
How stroke patients could be set for 'game-changing' treatment

Undergoing a mechanical thrombectomy can significantly improve the chances of recovery for individuals who suffer from a severe form of stroke

Who is Eligible for Thrombectomy?

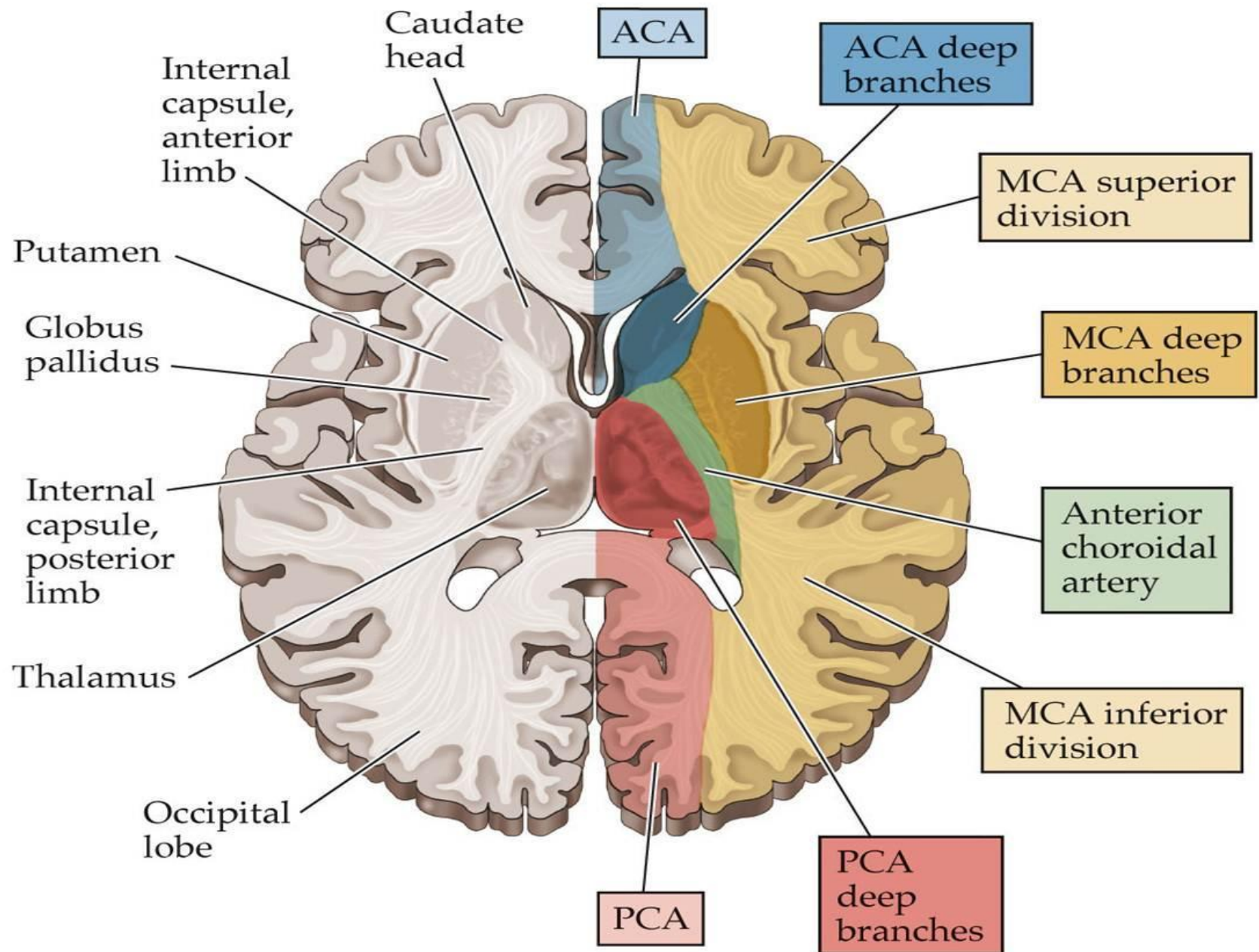
(1)

- Confirmed occlusion of M1, M2, ICA, Basilar artery (CTA)





(B)



Who is Eligible for Thrombectomy? (2)

RCP Guidelines:

“Patients with acute ischaemic stroke should be considered for combination intravenous thrombolysis and intra-arterial clot extraction (using stent retriever and/or aspiration techniques) if they have a proximal intracranial large vessel occlusion causing a disabling neurological deficit (National Institutes of Health Stroke Scale [NIHSS] **score of 6 or more**) and the procedure can begin (**arterial puncture**) **within 5 hours** of known onset.”

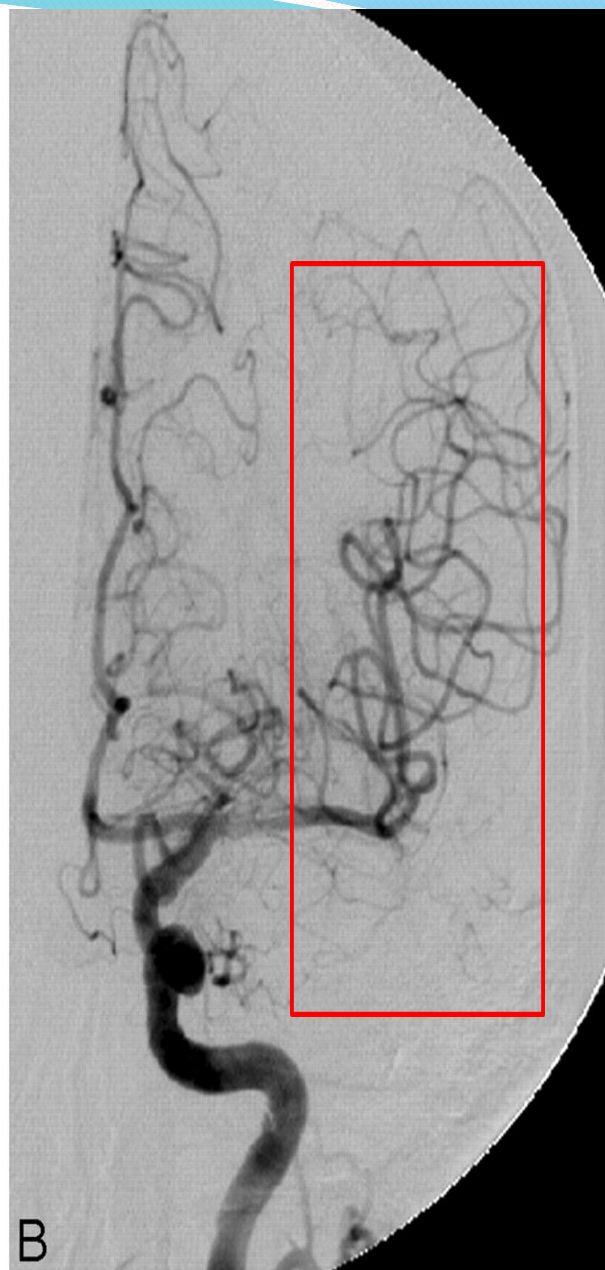
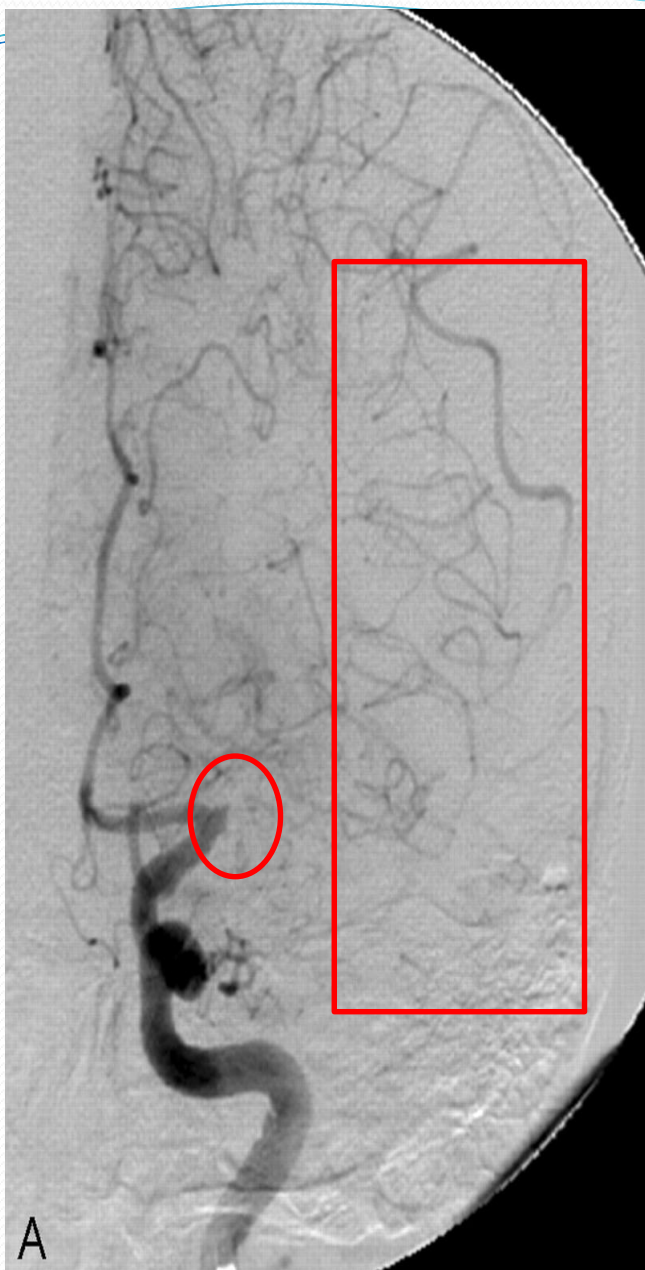
Who is Eligible for Thrombectomy? (3)

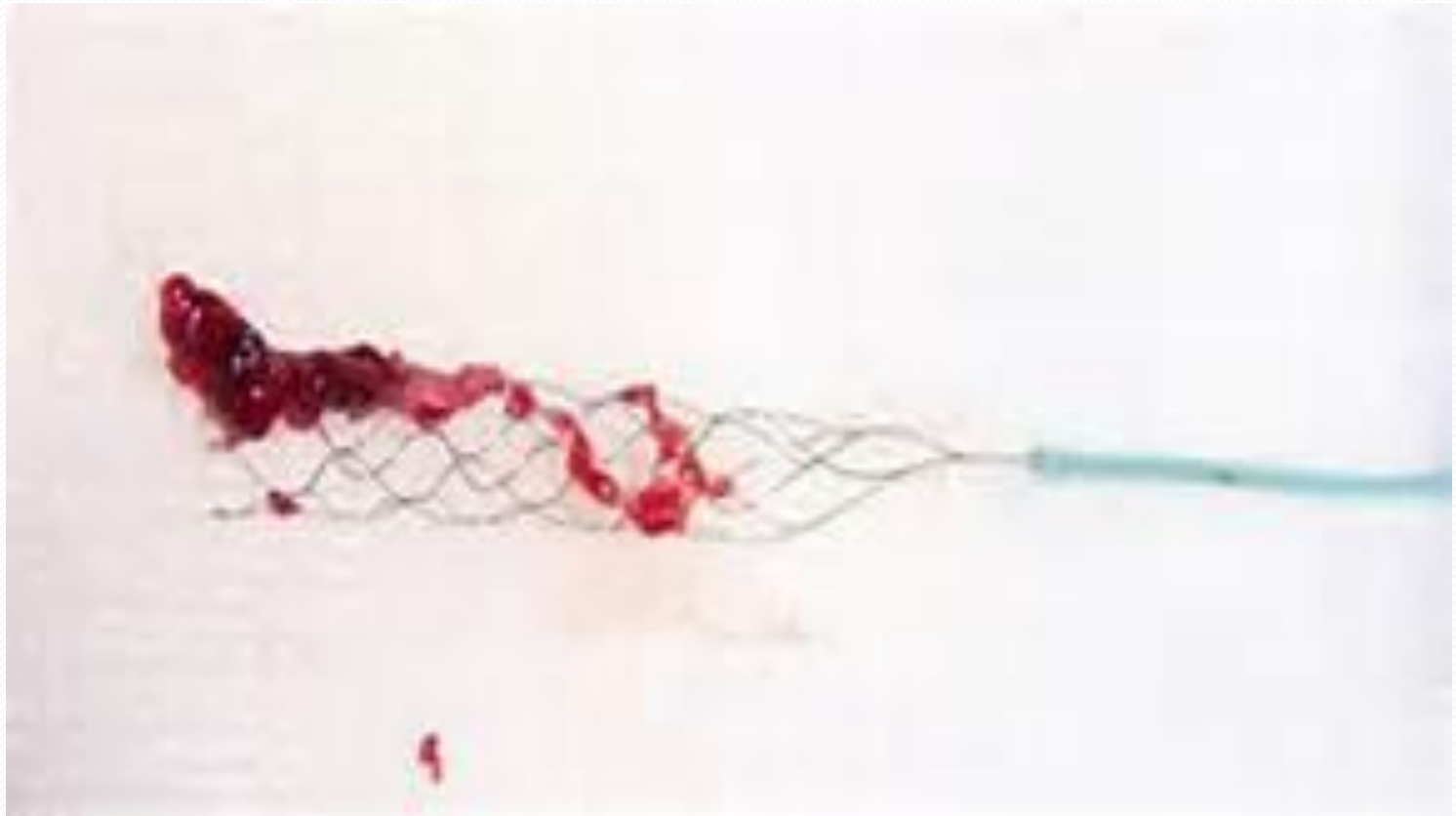
Modified Rankin Score	
0	No symptoms
1	Minor symptoms not affecting lifestyle
2	Usual Activity – Capacity to work, look after family or undertake social and leisure activity is impaired, but independent in ADLs
3	ADL dependency. Assistance essential for meals, basic household chores & expenses, local travel, shopping. <i>Could they live alone for 1 week?</i>
4	Walking. Assistance of another person essential for walking. (or transfer if patient is a wheelchair user)
5	Severe disability. Incontinent and requiring constant nursing care. Bed, wheelchair bound / requires full care / unable to walk despite help
6	Dead

Procedure

- Groin Puncture
- Take Catheter up to the ICA or Basilar
- Angiogram
- Can use – Stent Retrievers
 - Suction (Pump or Manual)
 - Balloon at the neck
- The clot may be retrieved or not
- If not, will try again
- Procedure can take from 15 minutes – 1 hours, if there are complications, can take longer

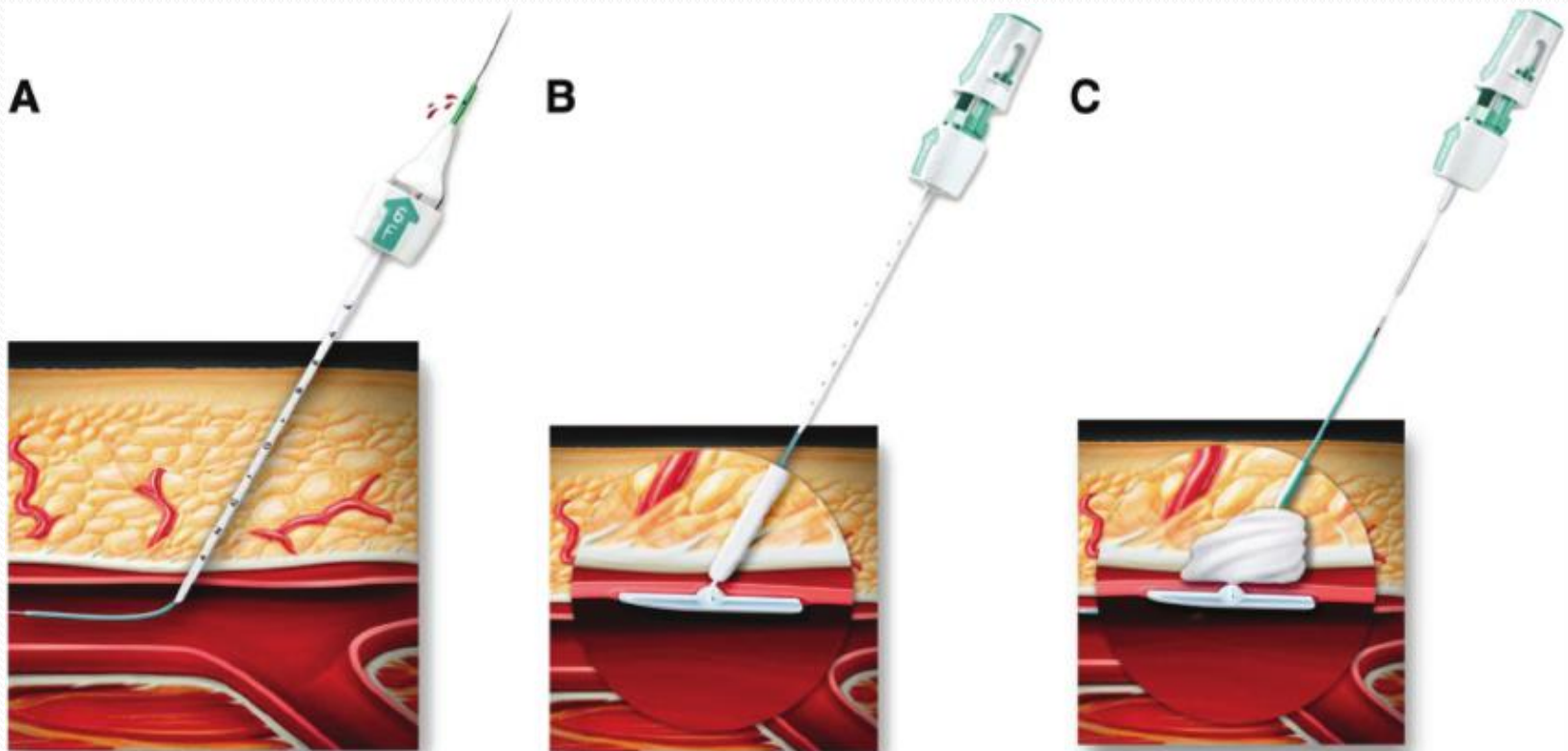






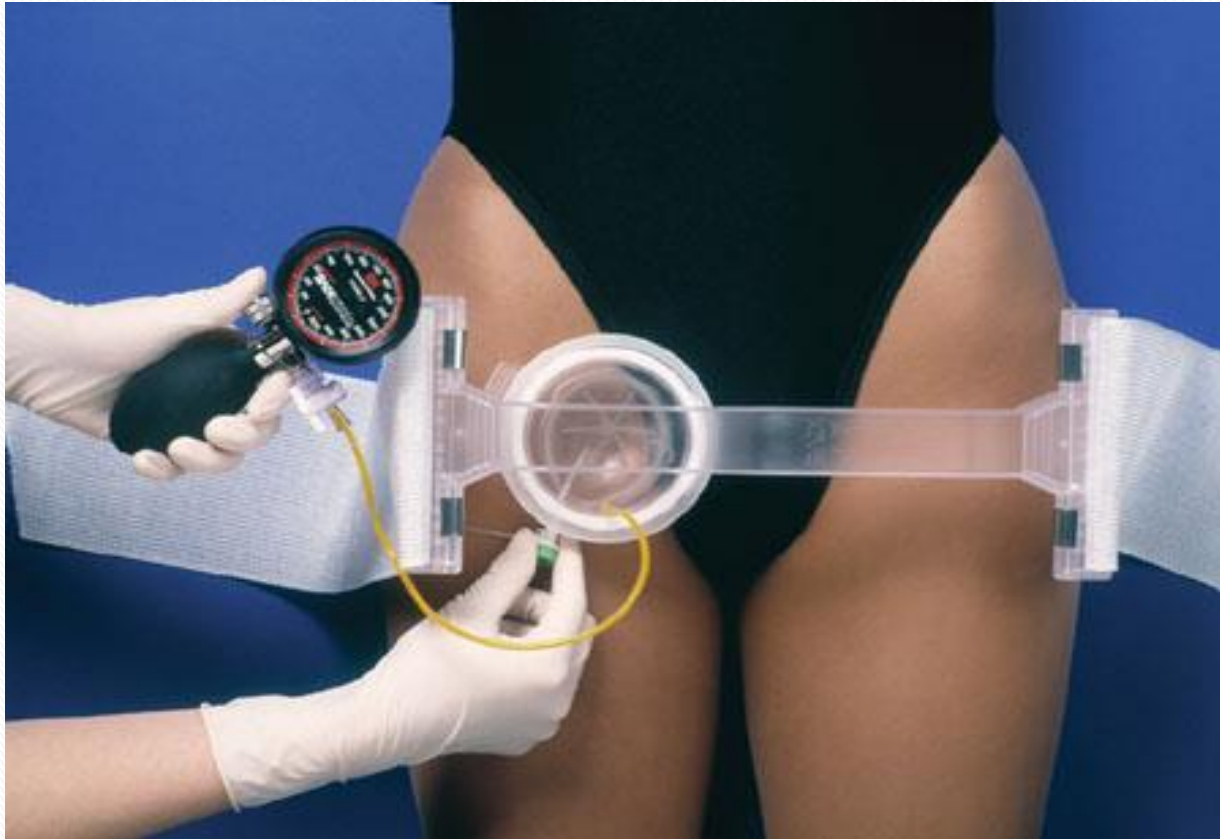
Closure / Femoral Device

- Angioseal



Closure / Femoral Device

- Fem stop



Closure / Femoral Device

- Safeguard



Post Thrombectomy Care

- Neurological observations and vital signs
- Assessment of puncture site
- Bed rest and time to ambulation
 - As per protocol/instruction
- Pulse assessment
 - Femoral
 - Popliteal
 - Dorsalis Pedis



THE END

Any Questions?