Treatment Effect: Overall Population

Odds Ratio: 2.8 (1.6-4.7)  P=0.0001
DEFUSE 3: Subgroup Analysis

- Age
- NIHSS
- Time
- Imaging: MR vs CT
- Anesthesia

Preliminary analysis
Age

- SWIFT-PRIME, REVASCAT excluded patients >80
- DEFUSE 3 enrolled patients up to 90 years old
  - Median age: 70 years
  - IQR: 59 – 80 years
Probability of mRS 0-2 by Age

Endovascular
Medical
Odds Ratio

Treatment Effect (mRS shift) by Age

Age

Odds Ratio

0 1 2 3 4 5 6 7 8 9 10

20 30 40 50 60 70 80 90
Treatment Effect (mRS shift) in the Very Elderly

Medical (n=66)
- <80: 11, 6, 5, 20
- ≥80: 24, 15, 20

Endovasc (n=70)
- <80: 13, 16, 23, 16, 19, 6, 9
- ≥80: 11, 6, 5, 20

OR 2.9 (1.6 – 5.3) for endovasc vs medical

P=0.7

OR 2.3 (0.8 – 6.7) for endovasc vs medical
• Patients with mild neurological symptoms may benefit less from endovascular therapy
• DAWN included patients with NIHSS ≥10
• DEFUSE 3 enrolled patients with NIHSS ≥ 6
  • Median NIHSS 16
  • IQR 11 - 21
Probability of mRS 0-2 by NIHSS

![Graph showing the probability of mRS 0-2 by NIHSS with two curves: one for Endovascular and one for Medical. The graph indicates that the probability decreases as NIHSS increases.]
Treatment effect (mRS shift) by NIHSS

Odds Ratio vs. NIHSS
• Strong evidence from early-window endovascular trials that time modifies the effect of treatment
• DEFUSE 3 enrolled patients in the 6 – 16 hour time-window
  • Median time (onset to randomization): 10:50
  • IQR 8:43 – 12:42
Probability of mRS 0-2 by Randomization Time

Endovascular
Medical

Probability mRS 0-2

Time (hours)
Qualifying Imaging: CT vs MRI

OR 4.3 (1.5 – 12)
P=0.5

OR 2.4 (1.3 – 4.5)
General Anesthesia vs Conscious Sedation

- Prior studies suggest worse outcomes with general anesthesia
- The use of general anesthesia was discouraged in the DEFUSE 3 trial
- Nevertheless, 28% of the endovascular patients underwent general anesthesia
90 day mRS stratified by EVT and sedation

- Medical alone (n=90)
  - 0%: 8
  - 20%: 4
  - 40%: 4
  - 60%: 16
  - 80%: 27
  - 100%: 16

- EVT with GA (n=26)
  - RR: 3.2 (1.9-5.3)

- EVT with CS (n=66)
  - RR: 0.4 (0.2-0.9)
  - RR: 1.4 (0.6-3.2)
Conclusions

The favorable treatment effect of endovascular therapy in the 6-16 hour time-window is maintained in patients:

- Up to 90 years old
- With NIHSS scores as low as 6
- With onset-to-treatment times up to 16 hours
- Selected with CT or MR perfusion imaging

But is attenuated in patients who receive endovascular therapy under general anesthesia.
Thank you