Stroke (뇌경색) classification
- Onset time estimation

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Time is brain

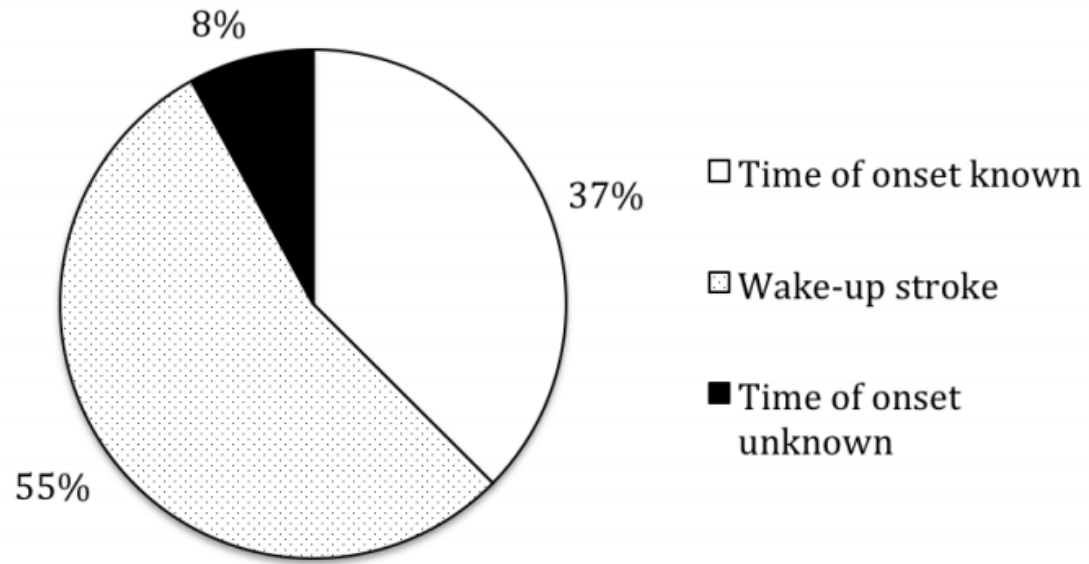Blood clot stops the
flow of blood to an area
of the brain
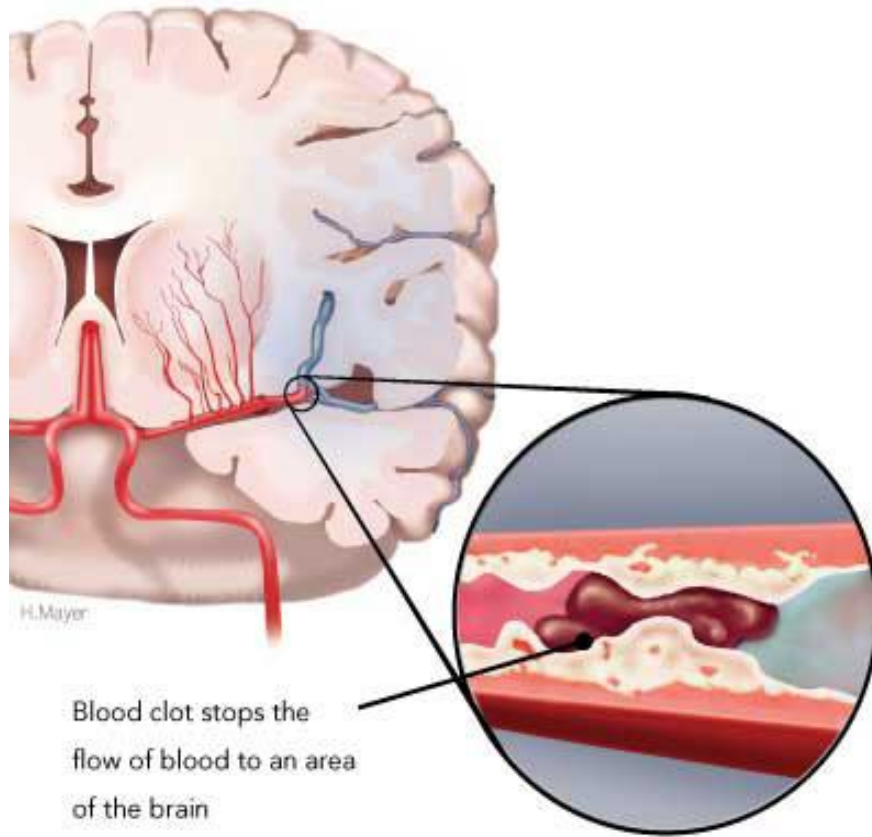
2 Million
brain cells die every minute
increasing the risk of permanent brain
damage, disability or death.
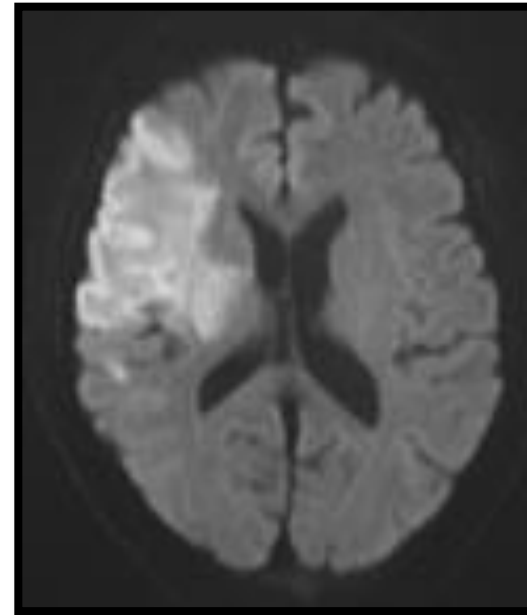
Golden time
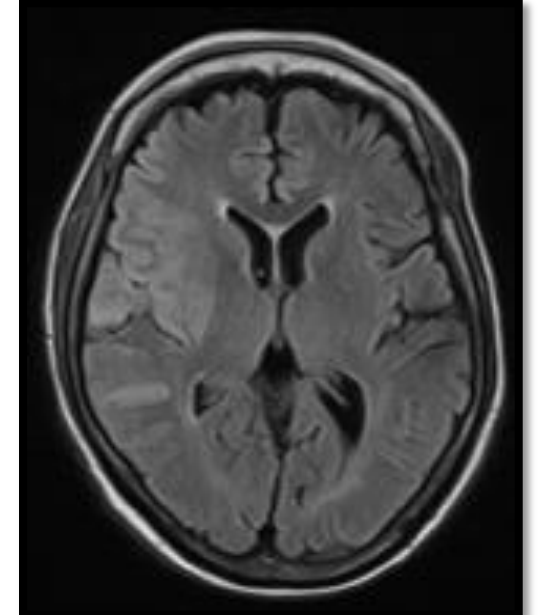IV treatment: ~ 4.5 h
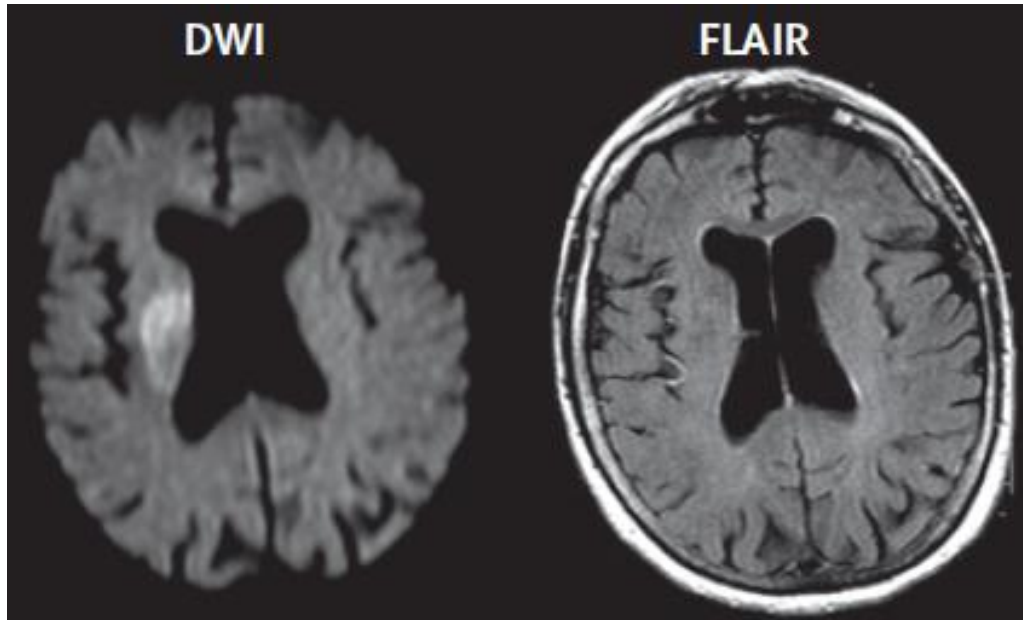IA treatment: ~ 6 h

Unclear onset stroke

Tissue clock

8%

37% □ Time of onset known

□ Wake-up stroke

■ Time of onset unknown

55%

Diffusion   FLAIR

~ minutes   ~ hours

Human reading

DWI   FLAIR

Within 4.5 h to tPA?

In 543 patients, with DWI-FLAIR mismatch:
Sensitivity 62%, Specificity 70%

DWI-FLAIR mismatch for the identification of patients with acute ischaemic stroke within 4·5 h of symptom onset (PRE-FLAIR): a multicentre observational study

Götz Thomalla, Bastian Cheng, Martin Ebinger, Qing Hao, Thomas Tourdias, Ona Wu, Jong S Kim, Lorenz Breuer, Oliver C Singer, Steven Warach, Soren Christensen, Andras Treszl, Nils D Forkert, Ivana Galinovic, Michael Rosenkranz, Tobias Engelhorn, Martin Köhrmann, Matthias Endres, Dong-Wha Kang, Vincent Dousset, A Gregory Sorensen, David S Liebeskind, Jochen B Fiebach, Jens Fiehler, Christian Gerloff, for the STIR and VISTA Imaging Investigators
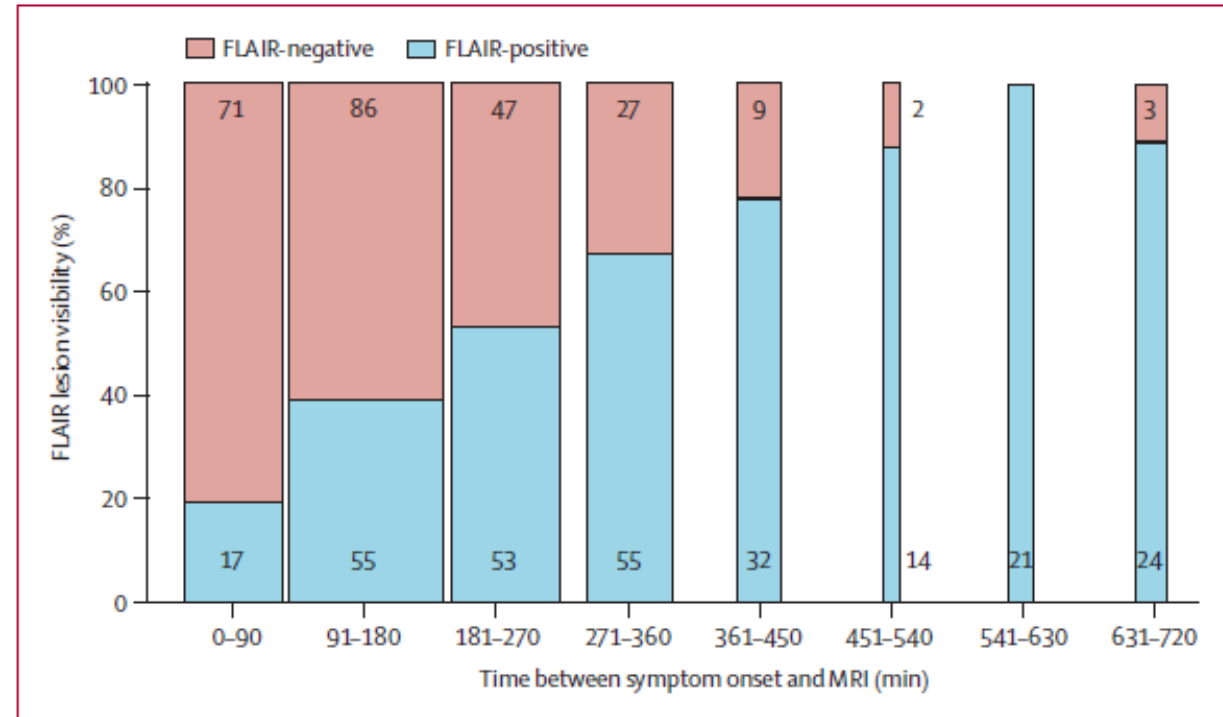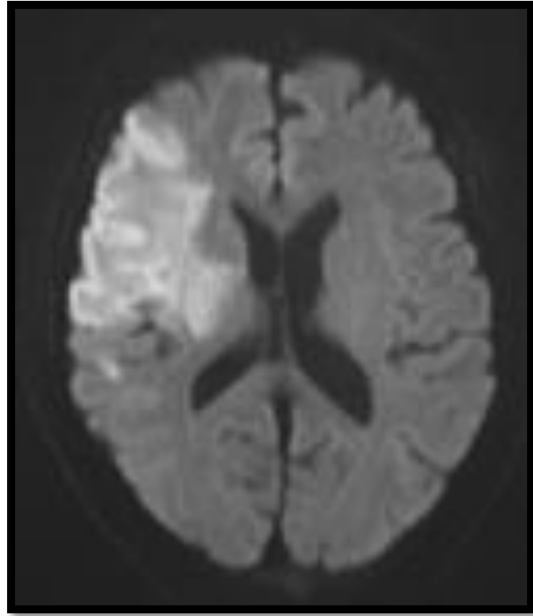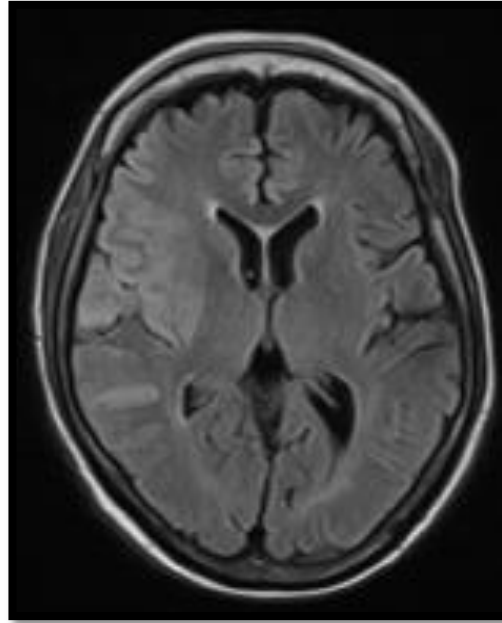
Figure 3: FLAIR lesion visibility in relation to time from symptom onset
Visibility of acute ischaemic lesions on FLAIR images in relation to time from symptom onset. Numbers are patients within each time interval, which also relate to the widths of the columns. FLAIR=fluid-attenuated inversion recovery.

Lancet Neurol 2011

Task

Diffusion　　　　**FLAIR**

뇌경색 발생한 지 몇 시간 지났을까요?