



Additional File 3. OVERVIEW OF ADDITIONAL FEATURES OF COMPASS

Calculator icons  to the right of several text boxes can be used to access additional features, which in current practice are largely undertaken using paper-based materials.



- **Timeline graph** – selecting this tab shows the decrease in predicted net benefit from thrombolytic treatment as a function of increasing stroke onset time to treatment (see next page)
- **Glucose convertor (mg/dl to mmol/L)**
- **National Institute of Health Stroke Scale (NIHSS)** – see next page
- **Weight conversion (stones/lbs to Kg)**
- **Calculated onset time to treatment in minutes** (derived from patient values entered for onset time and estimated time likely to treat)
- **Thrombolysis (rt-PA) dosage calculator** (derived from value entered for a patient's weight).
 Selecting the  shows figures for:
 - Total rt-PA dose (mg)
 - 10% bolus (ml)
 - 90% IV infusion (ml/hr)
 - No of 50mg rt-PA vials needed

NIHSS Calculator

Carrier 2:57 PM 100%

NIHSS Calculator

Close

NB: the NIHSS calculator should only be used by clinicians who have undergone specific training on the NIHSS

1a. Level of Consciousness: 0 1 2 3 0 - Alert, Keenly Responsive.

1b. LOC Questions: 0 1 2 1 - Answers one question correctly.

1c. LOC Commands: 0 1 2 1 - Performs one task correctly.

2. Best gaze: 0 1 2 1 - Partial gaze palsy.

3. Visual: 0 1 2 3 0 - No visual loss.

4. Facial Palsy: 0 1 2 3 1 - Minor paralysis (flat nasolabial fold, smile asymmetry).

5a. Motor Arm (left): 0 1 2 3 4 UN 2 - Some effort against gravity.

5b. Motor Arm (right): 0 1 2 3 4 UN 0 - No drift.

6a. Motor Leg (left): 0 1 2 3 4 UN 1 - Drift.

6b. Motor Leg (right): 0 1 2 3 4 UN 1 - Drift.

7. Limb ataxia: 0 1 2 UN 0 - Absent.

8. Sensory: 0 1 2 0 - Normal; no sensory loss.

9. Best language: 0 1 2 3 1 - Mild to moderate aphasia.

10. Dysarthria: 0 1 2 UN 1 - Mild-to-moderate dysarthria.

11. Extinction and inattention: 0 1 2 0 - No abnormality.

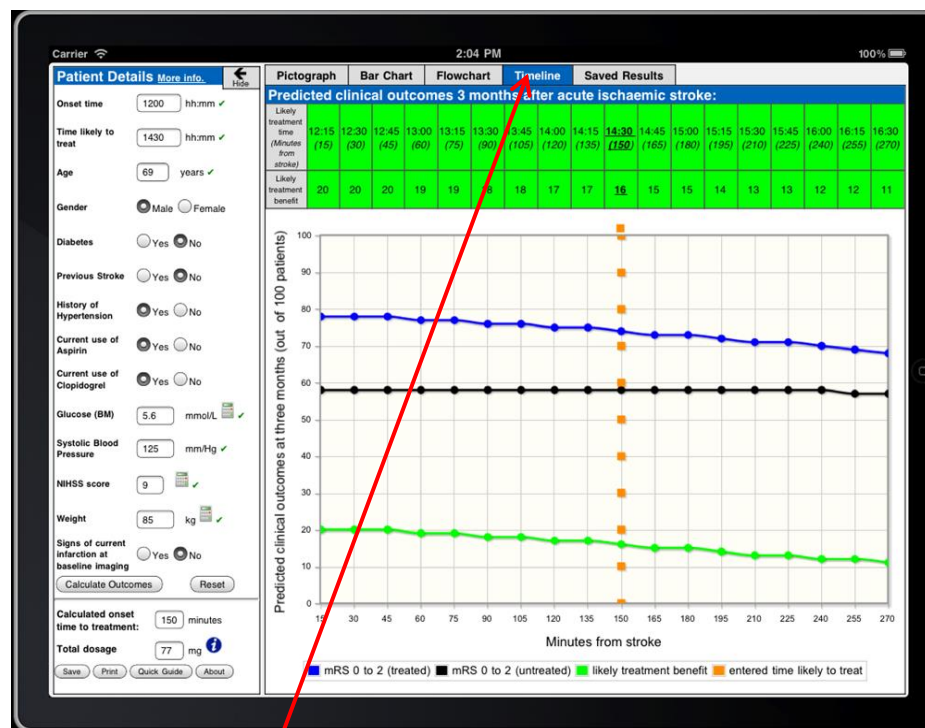
Calculate NIHSS Score: 10 Set score and close Reset

About Saved results

An electronic version of the NIHSS (used by trained qualified stroke physicians to assess the severity and extent of impairments due to stroke) is embedded in COMPASS.

By selecting the **numerical value** for the corresponding category in the NIHSS a **textual description** for the value selected is displayed to the right of the screen

Timeline Graph



After patient details have been populated and the treating clinician has selected 'calculate outcomes, by selecting the **timeline tab** the following information is displayed:

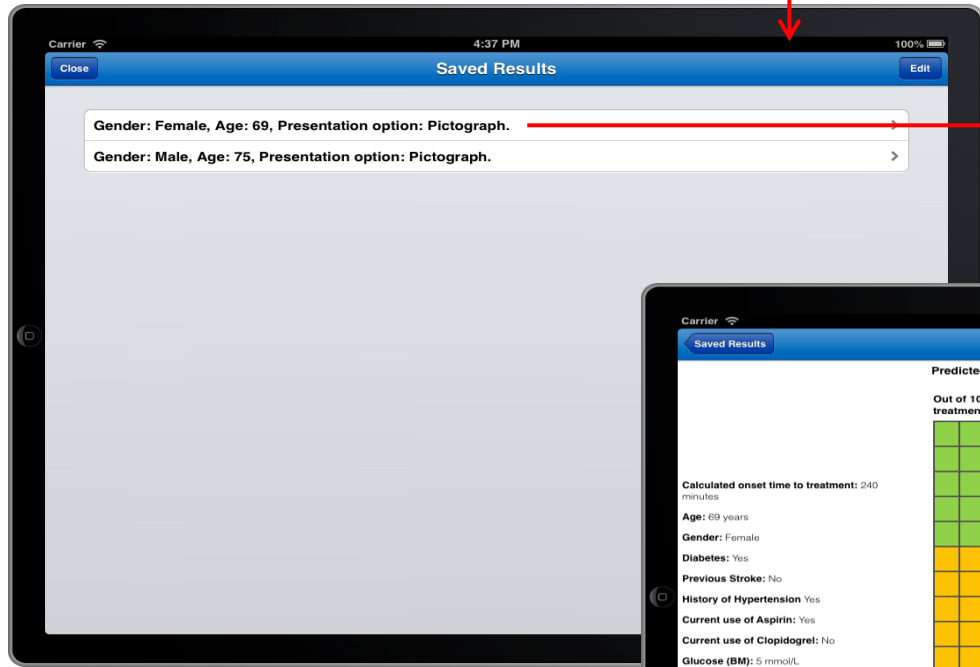
- Numerical values (out of 100 patients) for predicted net benefit (mRS 0 to 2) from thrombolytic treatment as a function of increasing stroke onset time to treatment in 15 minutes intervals
- The same information is shown in the line graph (green line)

Save functionality

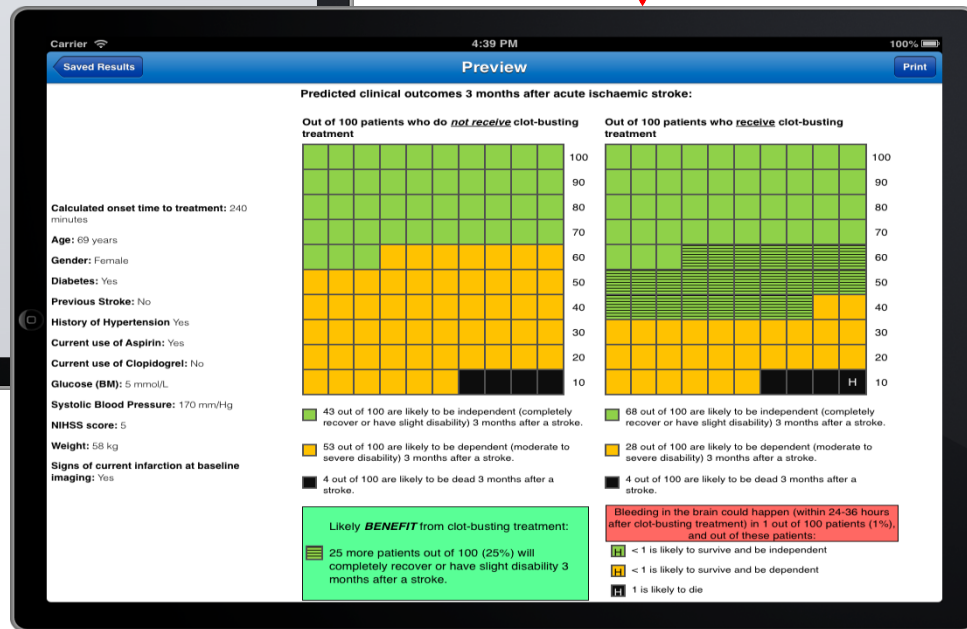


Tap here to open and view saved patient details and related predicted clinical outcomes.

Tap here to save entered patient details and predicted clinical outcomes



Select the desired save result to view – see below



Print functionality



Tap print for a hard copy of predicted clinical outcomes (entered or saved) in either monochrome (black and white or colour). NB: wireless printer recommended

A screenshot of the mobile application interface. The main screen displays a 'Preview' of clinical outcomes for a patient. A 'Printer Options' dialog box is overlaid in the center, showing a printer selection (monmouth), a copy count of 1, and a 'Print' button. The background report includes patient details, a grid of outcomes, and a summary of benefits and risks.

Printer Options

Printer: monmouth

1 Copy

Print

Predicted clinical outcomes 3 months after acute ischaemic stroke:

Out of 100 patients who do not receive clot-busting treatment

Out of 100 patients who receive clot-busting treatment

Calculated onset time to treatment: 240 minutes

Age: 69 years

Gender: Female

Diabetes: Yes

Previous Stroke: No

History of Hypertension: Yes

Current use of Aspirin: Yes

Current use of Clopidogrel: No

Glucose (BM): 5 mmol/L

Systolic Blood Pressure: 170 mm/Hg

NIHSS score: 5

Weight: 58 kg

Signs of current infarction at baseline imaging: Yes

43 out of 100 are likely to be independent (completely recover or have slight disability) 3 months after a stroke.

53 out of 100 are likely to be dependent (moderate to severe disability) 3 months after a stroke.

4 out of 100 are likely to be dead 3 months after a stroke.

Likely **BENEFIT** from clot-busting treatment:

25 more patients out of 100 (25%) will completely recover or have slight disability 3 months after a stroke.

68 out of 100 are likely to be independent (completely recover or have slight disability) 3 months after a stroke.

28 out of 100 are likely to be dependent (moderate to severe disability) 3 months after a stroke.

4 out of 100 are likely to be dead 3 months after a stroke.

Bleeding in the brain could happen (within 24-36 hours after clot-busting treatment) in 1 out of 100 patients (1%), and out of these patients:

< 1 is likely to survive and be independent

< 1 is likely to survive and be dependent

1 is likely to die

NB: the save and print functionality can be used to facilitate case review within clinical meetings