QUICK SOLUTION GUIDE

ACUTE STROKE WITH ALTEPLASE INDICATION AND HYPERTENSION

SCENARIO **#32**

NAME
IRENE CORNELL

SPECIALTY
Neurology

DIFFICULTY LEVEL
ADVANCED

SIMULATION ENVIRONMENT
INTRA HOSPITAL - EMERGENCY ROOM

BODY INTERACT™
VIRTUAL PATIENTS

Dialogues

Ask the following questions to the patient:

History Taking

Chief Complaint

- How are you feeling?

- What happened to you?

History of Present Illness

- Are you in pain at all?

- How long has it been since the symptoms started?

Past Medical/Surgical History

- Do you have diabetes?

Medications and Allergies

- Are you currently taking any medication?

Physical examination

Perform the following physical examinations:

Airway

- Airway observation

Breathing

- O2 Sat (%)

- Respiratory rate (/min)

Circulation

- Blood pressure (mmHg)

- Heart rate (bpm)

Disability

- Blood glucose (mg/dL)

Medical tests

Request the following medical tests:

Decision aids

- Stroke scale (NIHSS)

Imaging

- Cerebral angiography

- Cerebral perfusion CT

- Head CT

Treatments

Administer the following treatments:

Labetalol - To treat high blood pressure

- Medications | Antihypertensives | Labetalol

Alteplase - To treat Left ischemic stroke/Severe left ischemic stroke

- Medications | Fibrinolytics | Alteplase

Oxygen - To treat Hypoxia. One of the following:

- Interventions | Oxygen | Nasal cannula

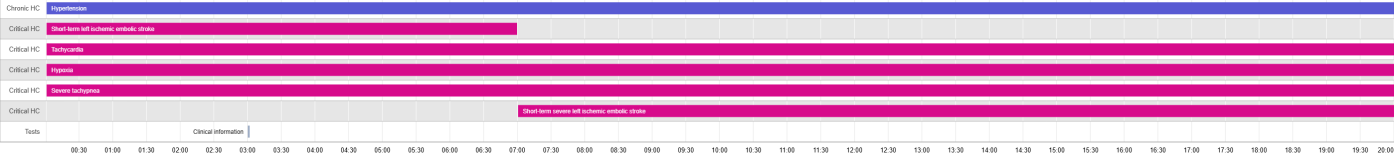- Interventions | Oxygen | High flow mask

Call to Stroke unit

- Call | Stroke unit

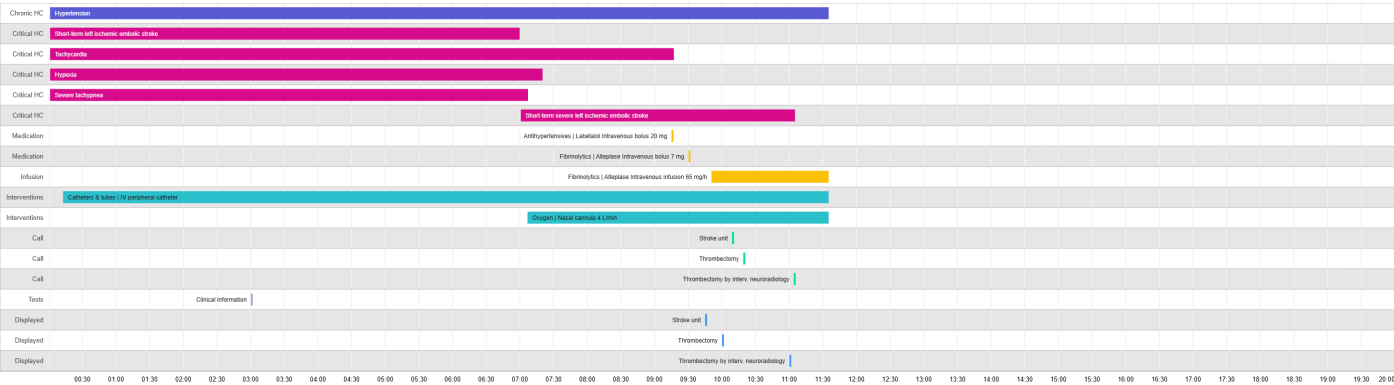**Call to Thrombectomy**

- Call | Thrombectomy

Baseline

Visualize the baseline approach. The baseline predicts scenario behavior assuming no actions by the trainee, which usually represents the worst-case scenario.

Optimal approach - International

Visualize the optimal approach to end your simulation successfully.

Chronic HC	Hypertension	
Critical HC	Short-term left ischemic embolic stroke	
Critical HC	Tachycardia	
Critical HC	Hypoxia	
Critical HC	Severe tachypnea	
Critical HC		Short-term severe left ischemic embolic stroke
Medication		Antihypertensives | Labetalol intravenous bolus 20 mg
Medication		Fibrinolytics | Alteplase intravenous bolus 7 mg
Infusion		Fibrinolytics | Alteplase intravenous infusion 65 mg/h
Interventions	Catheters & tubes | IV peripheral catheter	
Interventions		Oxygen | Nasal cannula 4 L/min
Call		Stroke unit
Call		Thrombectomy
Call		Thrombectomy by interv. neuroradiology
Tests	Clinical information	
Displayed		Stroke unit
Displayed		Thrombectomy
Displayed		Thrombectomy by interv. neuroradiology

Timeline: 00:30 01:00 01:30 02:00 02:30 03:00 03:30 04:00 04:30 05:00 05:30 06:00 06:30 07:00 07:30 08:00 08:30 09:00 09:30 10:00 10:30 11:00 11:30 12:00 12:30 13:00 13:30 14:00 14:30 15:00 15:30 16:00 16:30 17:00 17:30 18:00 18:30 19:00 19:30 20:00

Assessment question(s) during the simulation

Questions presented to the trainee in order to have a more detailed evaluation of the use of the clinical scenario.

Head CT question:

Question	Based on the patient's clinical assessment and the head CT findings, select the most likely diagnosis:
Correct answer	Acute ischemic stroke
2 Incorrect answer(s)	Hemorrhagic stroke
	Brain tumor

Head CT question:

Question	Does this CT have signs of any intracranial hemorrhage?
Correct answer	No
1 Incorrect answer(s)	Yes

Head CT question:

Question	Based on the neurological assessment, please rate the stroke severity:
Correct answer	Moderate stroke
2 Incorrect answer(s)	Minor stroke
	Severe stroke

Head CT question:

Question	Are there any contraindications for thrombolysis?

Correct answer   Yes

1 Incorrect answer(s)   No

Head CT question:

Question   Based on the patient's clinical assessment and the head CT findings, select the most likely diagnosis:

Correct answer   Acute ischemic stroke

2 Incorrect answer(s)   Hemorrhagic stroke

    Brain tumor

Head CT question:

Question   Does this CT have signs of any intracranial hemorrhage?

Correct answer   No

1 Incorrect answer(s)   Yes

Head CT question:

Question   Based on the neurological assessment, please rate the stroke severity:

Correct answer   Moderate stroke

2 Incorrect answer(s)   Minor stroke

    Severe stroke

Head CT question:

Question   Are there any contraindications

for thrombolysis?

Correct answer	No
1 Incorrect answer(s)	Yes

Cerebral angiography question:

Question	Which vascular lesion is visible?
Correct answer	Occlusion of the left M1 MCA segment
2 Incorrect answer(s)	Occlusion of the left M3 MCA segment
	No occlusions

Cerebral angiography question:

Question	What is the extent of the established ischemic infarct in the CT scan?
Correct answer	No changes. ASPECTS: 10
2 Incorrect answer(s)	Minor lesion. ASPECTS: 8
	Large infarct. ASPECTS: 3

Cerebral angiography question:

Question	Does this patient have an indication for thrombectomy?
Correct answer	Yes
1 Incorrect answer(s)	No

Assessment question(s) after simulation

Questions presented to the trainee in order to have a more detailed evaluation of the use of the clinical scenario.

Summative Multiple Choice Question:

Question
What is the most likely diagnosis?

Correct answer
Ischemic stroke

3 Incorrect answer(s)
Migraine headache

Hemorrhagic stroke

Meningitis

Formative Multiple Choice Question:

Question
No lesions were documented in the head CT performed 24 hours after thrombolysis. What is the adequate treatment choice at this point?

Correct answer
Start single antiplatelet immediately

2 Incorrect answer(s)
Start oral anticoagulation

Postpone antithrombotic medication until 48 hours

Formative Multiple Choice Question:

Question
What is the maximum acceptable blood pressure value for thrombolysis administration?

Correct answer	185/110 mmHg
2 Incorrect answer(s)	165/100 mmHg
	205/120 mmHg

Formative Multiple Choice Question:

Question	What medical tests will this patient need after thrombolysis?
Correct answer	Transcranial Doppler; Neck ultrasound; ECG Holter
2 Incorrect answer(s)	Transcranial Doppler; CT perfusion; Neck ultrasound
	EEG; Neck ultrasound; Transcranial Doppler

Handoff question

Question presented to the trainee to assess their ability to effectively communicate patient information during a transition of care. This question is optional.

Question	Summarize this Body Interact scenario using a structured handoff pattern.
Review handoff pattern	SBAR (Situation, Background, Assessment, Recommendation): Includes current condition and reason for handoff, relevant history and context, assessment details, and recommended actions.
	SOAP (Subjective, Objective, Assessment, Plan): Covers patient-reported symptoms and

history, measurable data and findings, clinical impressions and diagnoses, and the treatment plan.

I-PASS (Illness Severity, Patient Summary, Action List, Situation Awareness and Contingency Planning, Synthesis by Receiver): Encompasses illness status, patient background, tasks and actions, potential changes and plans, and confirmation of understanding.

AT-MIST (Age, Time of incident or onset of symptoms, Mechanism of injury/Medical Complaint, Injuries or Inspections head-to-toe, vital Signs, and Treatments): Describes the cause of injury or medical complaint, findings from head-to-toe inspection, vital signs, and treatments provided.