

Visual Patient Intensive Care

Computer-based multicenter study

Instructions

- Thank you very much for participating in this study!
- Main topic of our study group: new forms of presentation of medical parameters



- Improving their perception
 - Improving situational awareness for possible changes
- Technique for vital sign presentation: "Visual Patient"
 - animated virtual model of the monitored patient

Instructions

- Study: Comparison of two ways of displaying vital signs
“Visual patient” vs. “conventional monitor”
- 1. Teachingvideo for the «Visual Patient»
- 2. Example of a «conventional monitor»
- 3. One by one: 10 monitor slides (15 seconds each)
 - 5x conventional design
 - 5x “Visual Patient”
- Try to remember as many vital signs and installations as possible
- Please answer the questions on the Ipad after each example

Instructions

Table with the defined limit values

Defined limits of vital signs

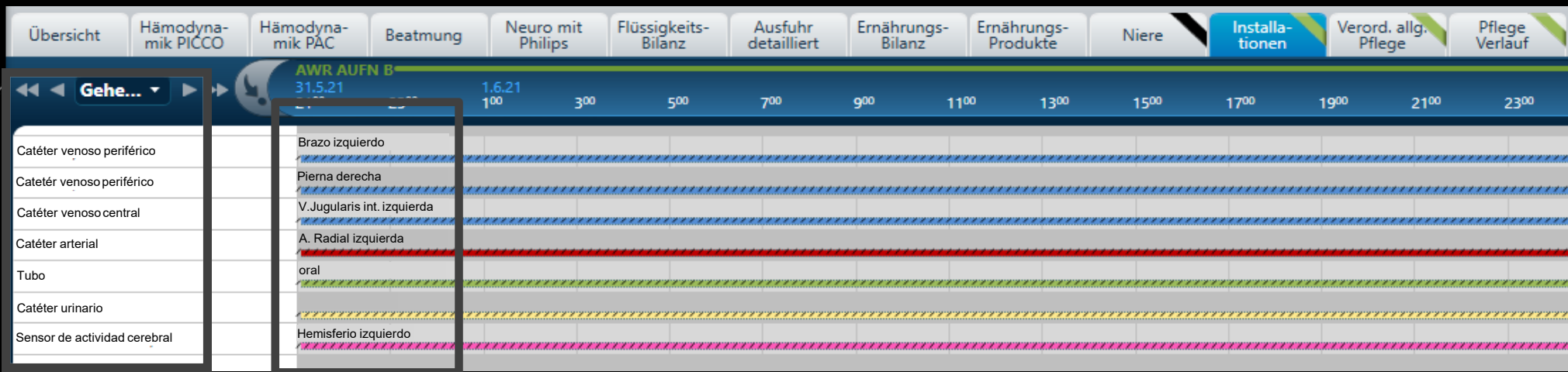
Parameter	Low VP	High VP	(Units)
HR (ECG)	<55	>100	/min
Pulse	<55	>100	/min
ABP (Mean)	<65	>100	mmHg
NBP (Mean)	<65	>100	mmHg
CVP (Mean)	<4	>12	mmHg
STE	<-0.2	>0.2	mV
SpO2	<94	none	%
RR	<8	>16	/min
TV	<350	>750	ml
etCO2	<35	>45	mmHg
Tcore	<36.0	≥37.5	°C
BIS	≤60	>60	(-)
TOF rat.	<90	≥90	%
CI	<2.5	>4	l/m ² /min
Peak airway pressure (PIP)	<10	>30	mbar
Insp. O2	<40	≥80	%

Introduction

- Teachingvideo «Visual patient»

Introduction

- Example «conventional monitor»



Survey

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	Too low	Safe	Too high	Not measured	No recall
Heart rate (ECG)/ Puls rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arterial blood pressure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Central venous pressure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respiratory rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tidal volume	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EtCO2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Core body temperature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Peak airway pressure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cardiac output (CI)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

☐ Answer Required

1: Brain activity (BIS):

☐ Asleep

☐ Awake

☐ Not measured

☐ No recall

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* 1: PiCCO:

☐ A. femoralis right

☐ A. femoralis left

☐ None

☐ No recall

☐ At least 1 answer required

* 1: Airway device:

☐ Tube

☐ LAMA

☐ None

☐ No recall

☐ At least 1 answer required

* 1: Urinary Catheter:

☐ At least 1 answer required

☐ None

Survey

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Move Slider

Next

* Please rate your confidence that you have correctly identified the vital signed deviations and the installations.

Confident

Very unconfident

Very confident

Testing

Back

Next

* How much time pressure did you feel performing the task? (0 = no time pressure, 100 = very much time pressure)

50

Answer Required

* How successful or satisfied did you feel upon the performance or completion of the given task? (0 = very successful, 100 = not successful)

50

Answer Required

* How hard did you have to work (mentally) to accomplish your level of performance? (0 = no effort, 100 = very much effort)

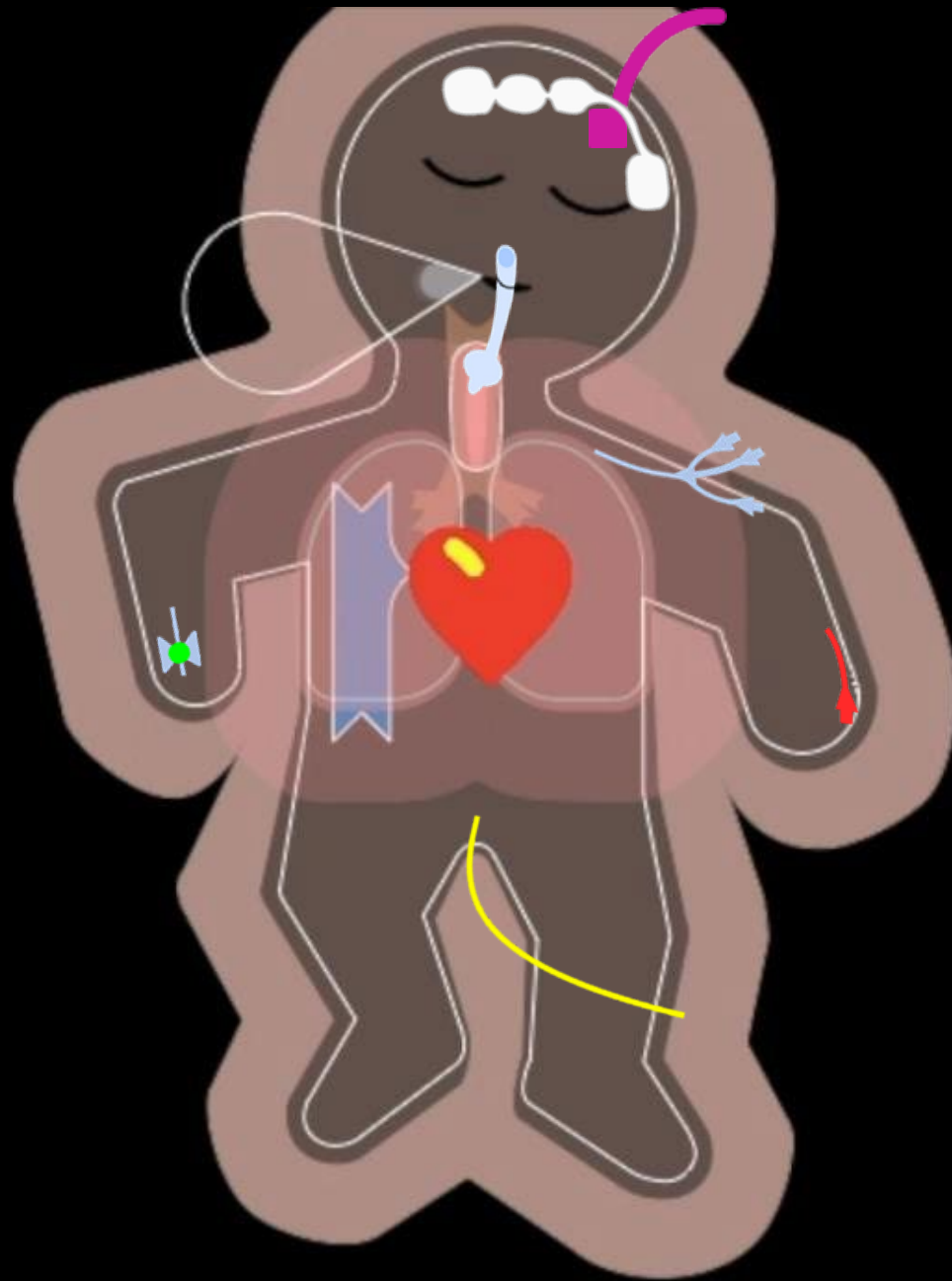
50

Answer Required

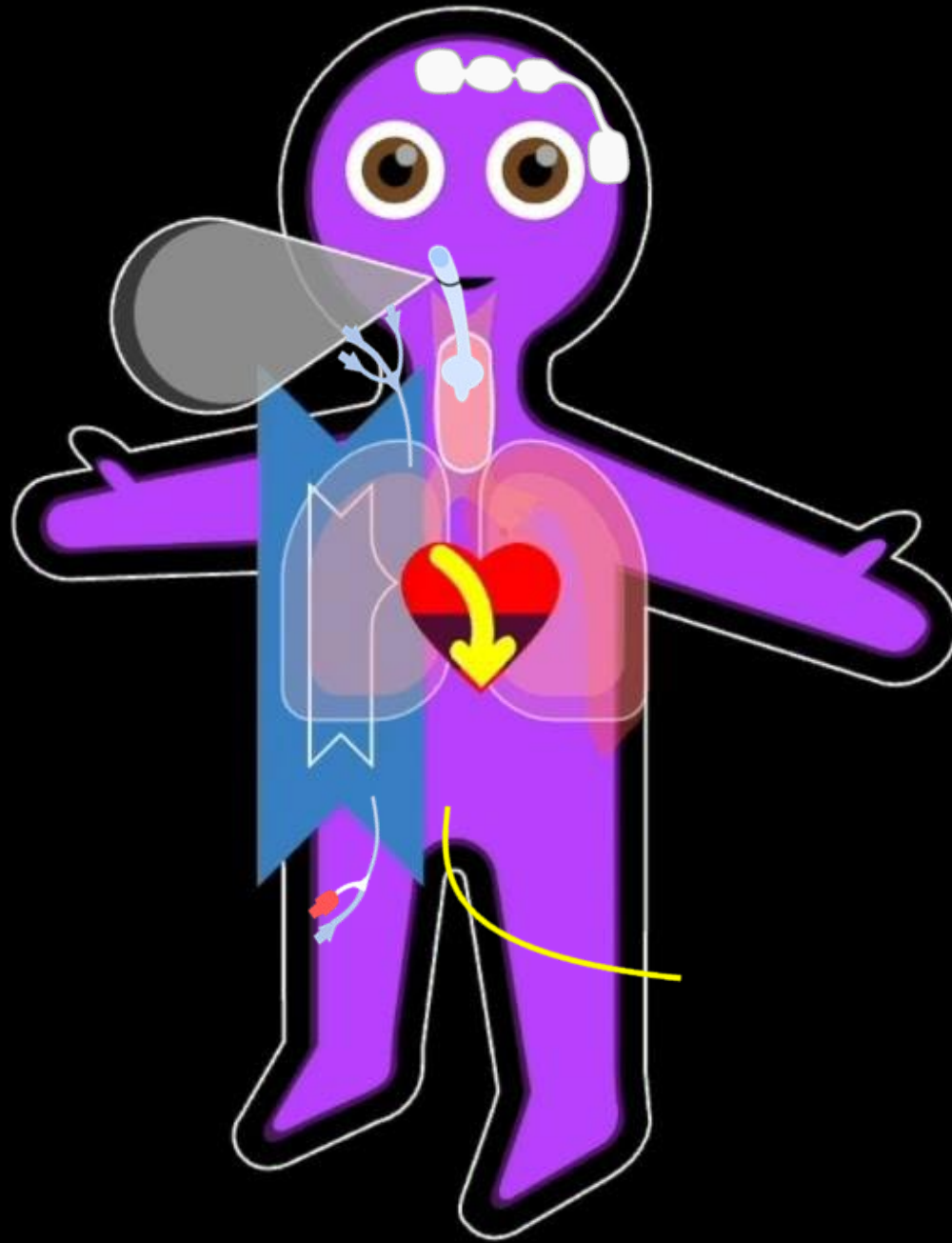
* How discouraged, stressed and annoyed vs. content did you feel during the task? (0 = very content, 100 = very insecure)

Answer Required

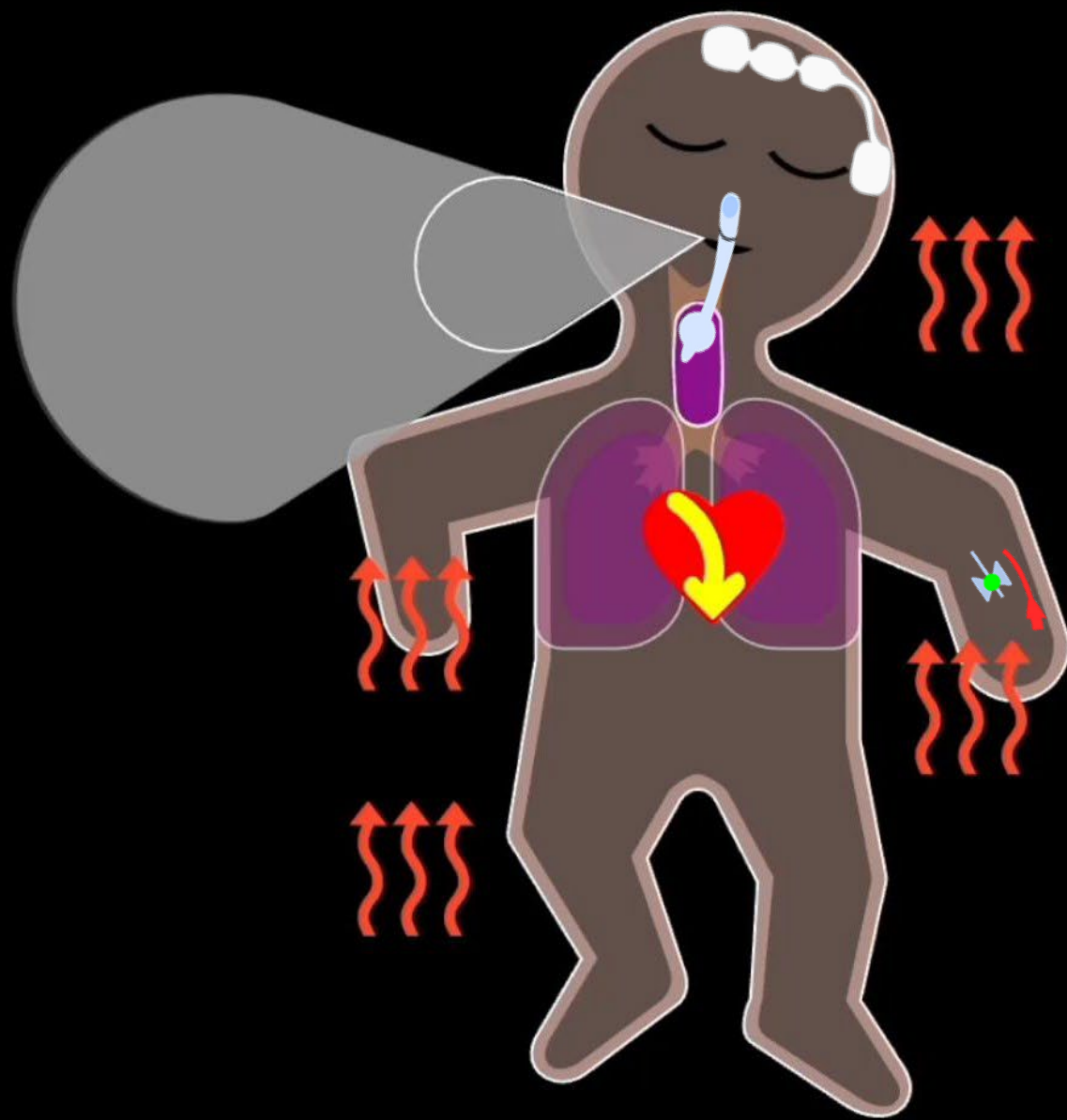
Case 1



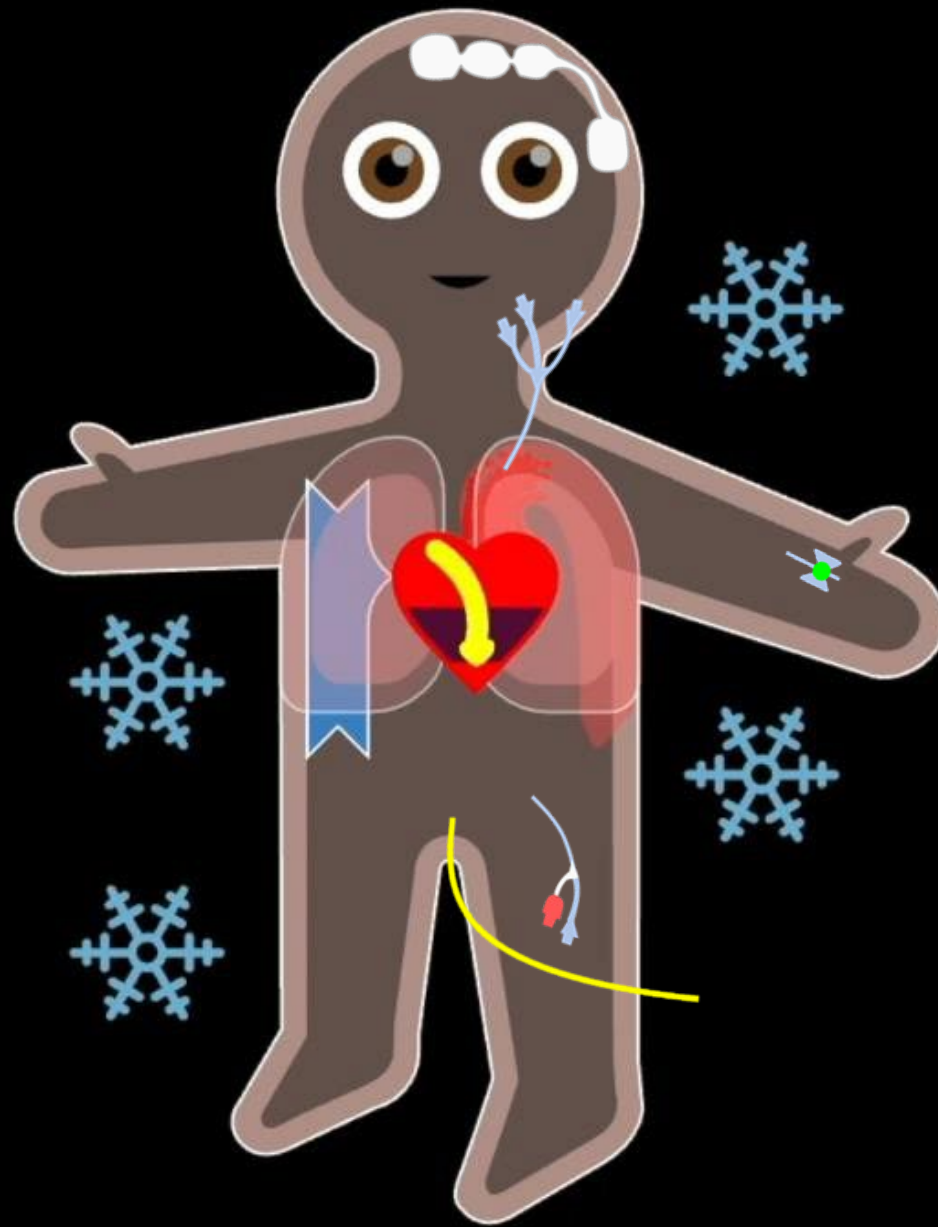
Case 2



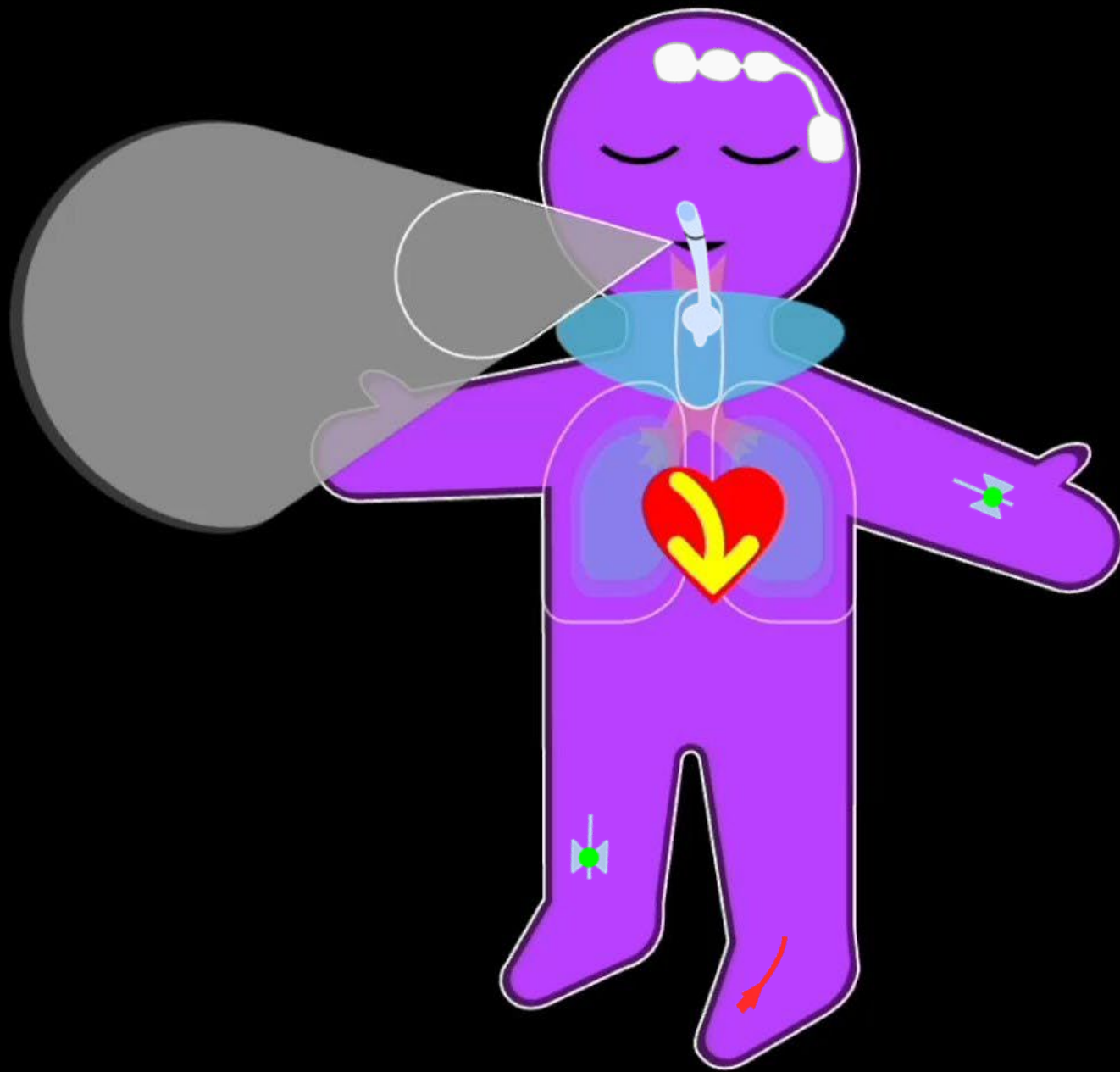
Case 3



Case 4



Case 5



Case 6



HR

67

ST-I 0.9
ST-II 0.5
ST-III 1.0
ST-aVR 0.2
ST-aVL 1.2
ST-aVF 0.4
ST-V 0.3

ABP 167/100
(110)

CVP 12/5
(8)

PIP

20

CO₂

10

etCO₂

3.2

RRaw

15

TV

900

BIS

50

Insp O₂

50

ore

37.0

SpO₂

98

TOFrat

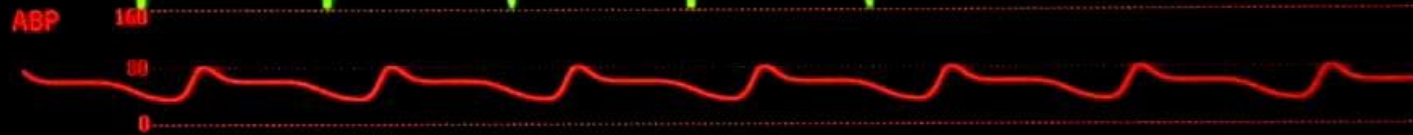
10

AWR AUFN B		30.5.21	1500	1700	1900	2100	2300	31.5.21	100	300	500	700	900	1100	1300	1500	1700
Catéter venoso periférico	Prazo derecho																
Catéter venoso central	Vena subclavia izquierda																
Catéter arterial	Arteria radial izquierda																
Tubo	Oral																
Catéter urinario																	
Sensor de actividad cerebral																	
Sonda de presión intracraneal	Hemisferio izquierdo																

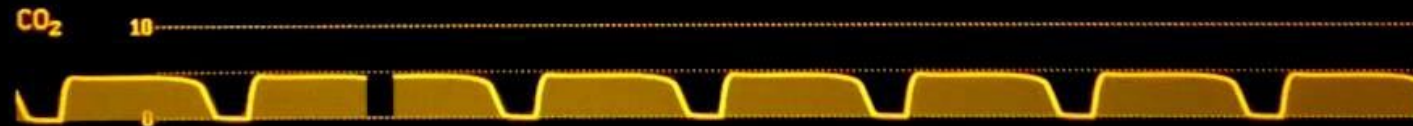
Case 7

↑ **SpO₂ Low

***ABP Low

ABP 80/35
(45)

CVP (19)



CI 1.0

PIP 22

etCO₂ 4.6

RRaw 15

TV 450

BIS 99

Insp O₂ 50

Tcore 36.9

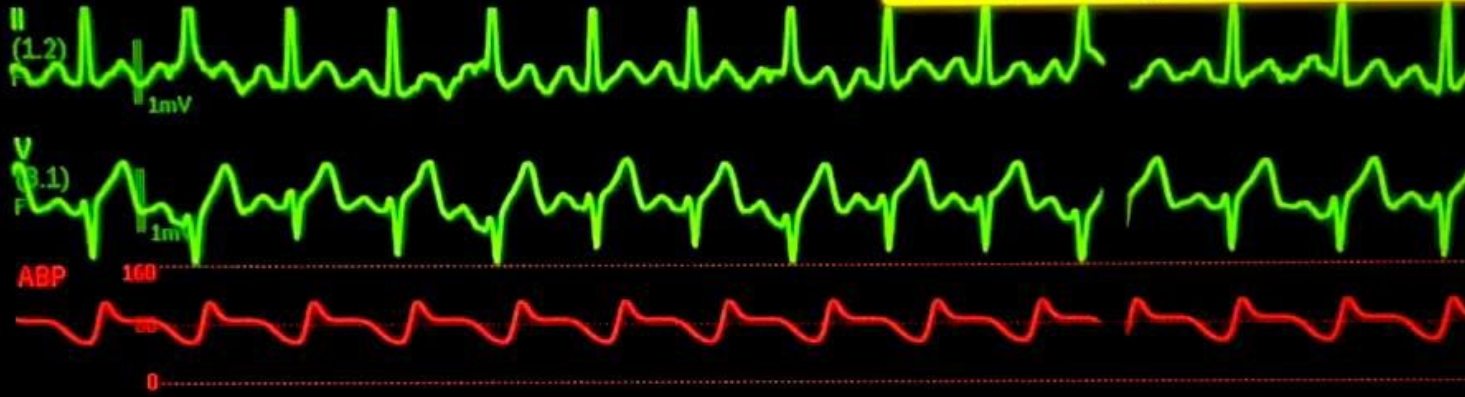
SpO₂ 88

TOFrat 99

AWR AUFN B		30.5.21	1500	1700	1900	2100	2300	31.5.21	100	300	500	700	900	1100	1300	1500	1700
Catéter venoso central	Vena jugular int. derecha																
Catéter PiCCO	Arteria femoral derecha																
Tubo	Oral																
Catéter urinario																	
Sensor de actividad cerebral	Hemisferio izquierdo																

Case 8

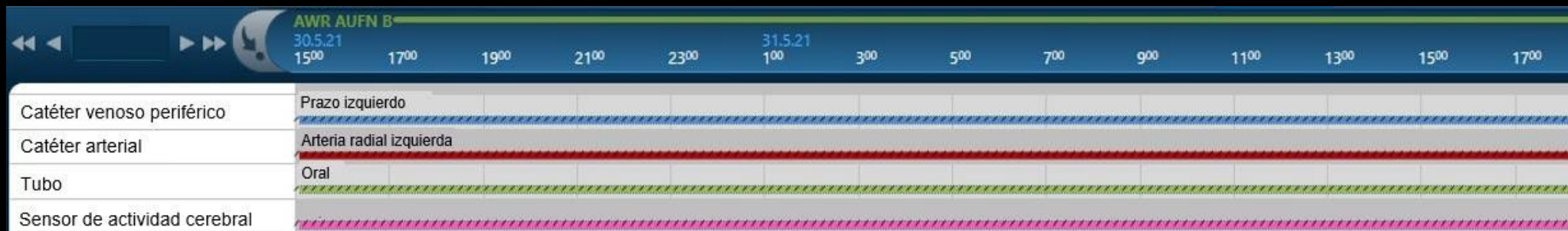
↑ **Tcore High

HR
109

ST-I	0.9
ST-II	0.5
ST-III	1.0
ST-aVR	0.2
ST-aVL	1.2
ST-aVF	0.4
ST-V	0.3

ABP 110/55
(65)etCO₂
7.8

PIP	24
RRaw	15
TV	500

BIS
43Insp O₂
25Tcore
39.9SpO₂
98TOF
40

Case 9

**Tcore Low

↑ *** Extreme Tachy

HR

110

ST-I	-3.5
ST-II	-2.8
ST-III	1.2
ST-aVR	0.6
ST-aVL	1.7
ST-aVF	2.4
ST-V	1.9

ABP

120/60
(70)

CVP

8/4
(7)

CI

6.8

PIP

RRaw

30

TV

BIS

99

Insp O2

Tcore

35.3

SpO₂

99

TOFrat

99



Case 10

↑ **etCO₂ High

HR

81

ST-I 0.9
ST-II 0.5
ST-III 1.0
ST-aVR 0.2
ST-aVL 1.2
ST-aVF 0.4
ST-V 0.3



ABP

160



ABP

120/55
(65)CO₂

10

etCO₂

6.5

PIP

45

RRaw

12

TV

250

BIS

40

Insp O₂

100

Tcore

37.0

SpO₂

89

TOFrat

99

AWR AUFN B

12.6.21

18⁰⁰20⁰⁰22⁰⁰

13.6.21

0⁰⁰2⁰⁰4⁰⁰6⁰⁰8⁰⁰10⁰⁰12⁰⁰14⁰⁰16⁰⁰18⁰⁰20⁰⁰

Catéter venoso periférico

Prazo izquierdo

Catéter arterial

Arteria dorsal pierna izquierda

Tubo

Oral

Sensor de actividad cerebral

Thank you so much for your help!