European Diploma Intensive Care Medicine OSCE-Exam using tablet computers

The EDIC part 2 exam

◆ **Two sessions per year in 8 European cities**

- Amsterdam
- Copenhagen
- Dublin
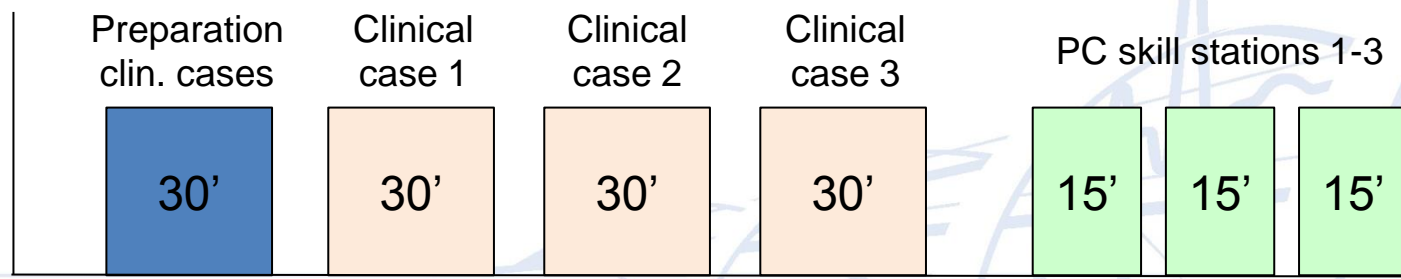- London
- Porto
- Prague
- Vienna
- Zürich

Exam setting

Candidate

Vignettes

Answer sheet

Exmaminer 2

Tablet

Examiner 1

Maximal capacity 576 candidates/ year

www.esicm.org

The EDIC part 2 exam

◆ **Objectives**

- Assess skills, attitudes, competency, and knowledge in intensive care medicine at the end of a 2 years formal training

- The content of the exam is based on CoBaTrICE, the standard is set by the EDIC committee.

- Exam structure: Two hours and 15 minutes of active interaction with 9 experts testing candidate performance on 3 clinical case scenarios (2 expert/case) and 3 computer skill stations (1 expert/station)

Preparation clin. cases	Clinical case 1	Clinical case 2	Clinical case 3	PC skill stations 1-3		
30'	30'	30'	30'	15'	15'	15'

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EDIC part 2: Setting the Standard

◆ **Exam station**

- ■ CCS: 12-18 questions including case evolution vignette
- ■ CBS: 8-12 slides

◆ **Answers/statement weighting:**

- ■ Factor = 5 if very important for the favorable evolution of the case
- ■ Factor = 3 if it contributes for the favorable evolution of the case but is not essential
- ■ Factor = 1 if it is good to know but does not add to the favorable evolution of the case

◆ **Points per exam station**

- ■ Σ of question's answer/s marked with 5 points sets the standard (pass mark) → *need the consensus of the committee members*
- ■ Σ of items marked with 1 & 3 points is ≤ of the Σ of the items marked with 5 points
- ■ The proportion of 5 point mark questions is 60 to 65%

EDIC part 2: Final pass mark

◆ **The "pass" mark for CCS** is obtained when the total score obtained by giving a correct answer to ***all 3 CCS*** questions divided the by sum of the points of all 5 point marked answers is more than 100%.

◆ **The "pass" mark for CBSs** is obtained when the total score obtained by giving a correct answer to *all 3 CBSs* questions divided the by sum of the points of all 5 points marked answers is more than 100%.

◆ **Final „pass" mark for EDIC part 2**

   ■ The candidate pass EDIC part II exam when his or her final mark for all 3 CCS and all 3 CBAs is a "pass".

EDIC part 2: Relationship between the total points obtained by candidates in CCS and CBS
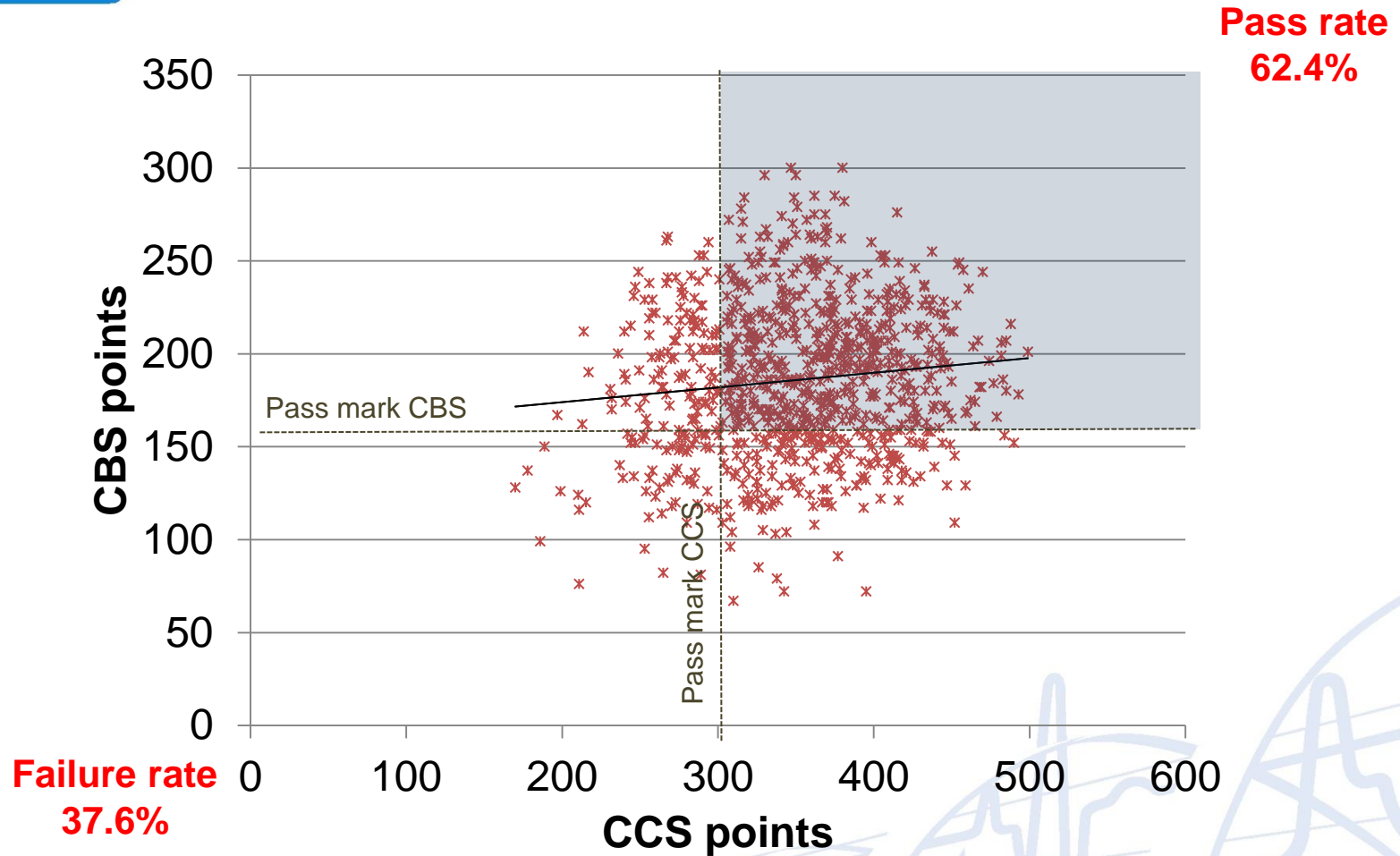
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Clinical Case Scenario

Clinical Case Scen...

Start Vignette (pre...

Vignette 1:

Background: An 81 year old lady ...
department, after a fracture of her rig...
month ago, she was started on warfa...
this visit one month ago showed norm...
She has a smoking history of 30 pac...
for shortness of breath. Otherwise sh...
On short neurologic exam in the traum...
HR 105 b/min, BP 125/85 mmHg, RR ...
On auscultation silent rhonchi were ...
the following results:

Blood gas	
6l O₂ Venturi Mask	
PaO₂	85 mmHg (11,3 k...
PaCO₂	60 mmHg (8 kP...
pH	7.29
Bicarbonate	26,2 mmol/l
BE	2,5 mmol/l
Lactate	1,6 mmol/l
Sodium	140 mmol/l
Potassium	4,5 mmol/l

She received a spinal anaesthesia for ...
after prothrombincomplex concentra...
two times 2mg morphine for comfort ...
130 b/min, and BP 75/30 mmHg. A l...
mmHg (22.1 kPa) and a PaO₂ of 5...
required) which was followed by a ...
were immediately started and after 1 ...
She was transported to the CT, which ...
was admitted to the ICU.

Clinical Case Scenario 3

Follow Up - Vignette 2a Follow up ...

6 hours later, after two units of red blood cells t...

Chemistry			Haem...
Na+	141	(136-145)	Haemo...
K+	4.7 mmol/l	(3.3-4.5)	Haema...
Urea	2,9 mmol/l	(2.86-8.21)	Platele...
Creatinine	65 µmol/L	(62-106)	Leukoc...
Albumin	26,9 g/l	(40-49)	Quick ...
Bilirubin	4 µmol/l	(<21)	INR
CRP	3,18 mg/dl	(<0,5)	
CK, total	199 µmol/l	(<190)	
CK MB (%)	8	(<10)	
GOT	30 U/l	< 35	
Troponin T	0.312µg/ml	(< 0.14)	
proNT-BNP	3754ng/l	(<376)	
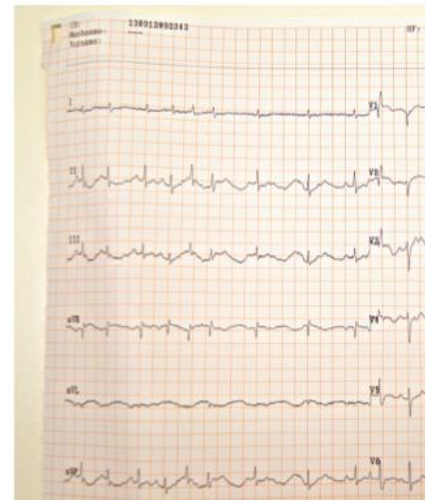
EDIC Part II Exam, May 2014 – Amsterdam, ...

e-Answer sheet

Prüfung Schilddrüse Prüflinge

Ein Hausarzt weist Ihnen in Ihre endokrinologische Praxis eine 28-jährige Patientin mit V.a. Schilddrüsenfunktionsstörung zur weiteren Abklärung zu.
Bitte lesen Sie die folgende Aufgabenstellung dem Studenten wörtlich vor:
Ein Hausarzt weist Ihnen in Ihre endokrinologische Praxis eine Patientin mit V.a. Schilddrüsenfunktionsstörung zur weiteren Abklärung zu.
Aufgabe 1: Bitte führen Sie eine schilddrüsenspezifische Anamnese durch.
Aufgabe 2: Bitte führen Sie eine schilddrüsenspezifische Untersuchung durch.

Aufgabe 1: Bitte führen Sie eine schilddrüsenspezifische Anamnese durch.	Punkte (max. 11)
Schwitzen	(1 Punkt)
Antriebsarmut, Müdigkeit, Abgeschlagenheit ↔ Nervosität, Unruhe	(1 Punkt)
Gesteigerte Kälteempfindlichkeit ↔ gesteigerte Wärmeempfindlichkeit	(1 Punkt)
Gewichtszunahme ↔ Gewichtsabnahme	(1 Punkt)
Verdauung: Obstipation ↔ Durchfall	(1 Punkt)
Niedriger Puls und Blutdruck ↔ Herzrasen, Tachykardie, hoher Blutdruck	(1 Punkt)
Auffälligkeiten Haut: trocken, kühl, teigig, schuppend	(1 Punkt)
Auffälligkeiten Haare: trocken, brüchig	(1 Punkt)
Vorerkrankungen und Voroperationen (speziell Schilddrüse)	(1 Punkt)
Familienanamnese bzgl. SD-Erkrankungen	(1 Punkt)
Medikation	(1 Punkt)

6,0

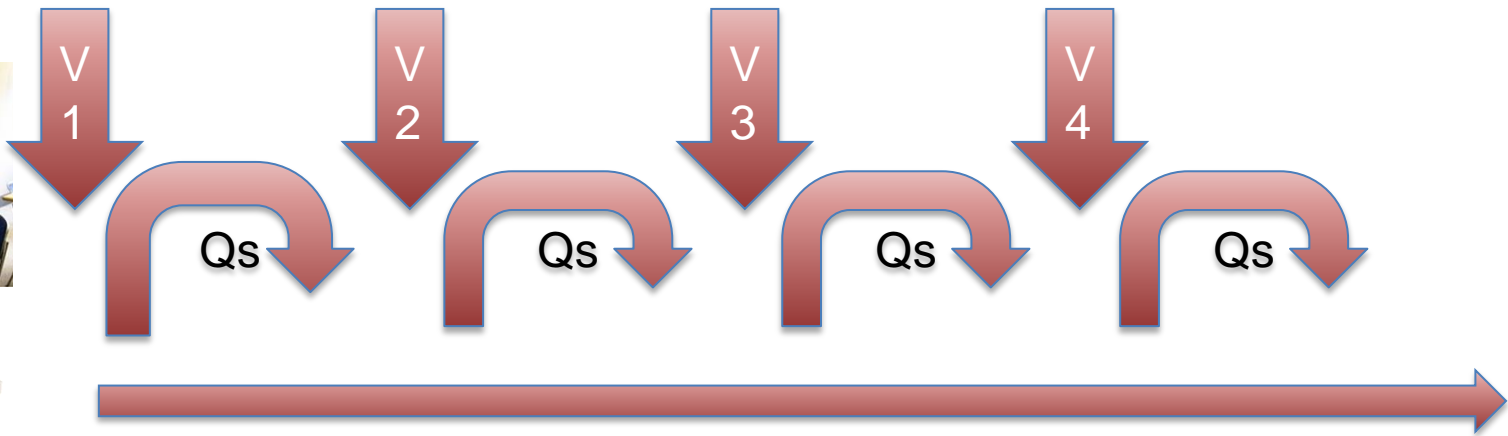| Aufgabe 2: Bitte führen Sie eine körperliche Untersuchung auf eine Schilddrüsenfunktionsstörung durch.	Punkte (max. 5)
Inspektion + Palpation inklusive Schluckverschieblichkeit	(1.25 Punkte)
Auskultation der SD	(1.25 Punkte)
Blutdruckmessung & Puls	(1.25 Punkte)

?

04:48 min   ☉ 17:34 Uhr   Gesamt: 6/21

Clinical Case Scenario

V
1

V
2

V
3

V
4

Qs   Qs   Qs   Qs

◆ **Examiners**

- Two examiners: Interviewer + Recorder (iPad)
- Dialogue fluently, hand out vignettes, ask predefined questions
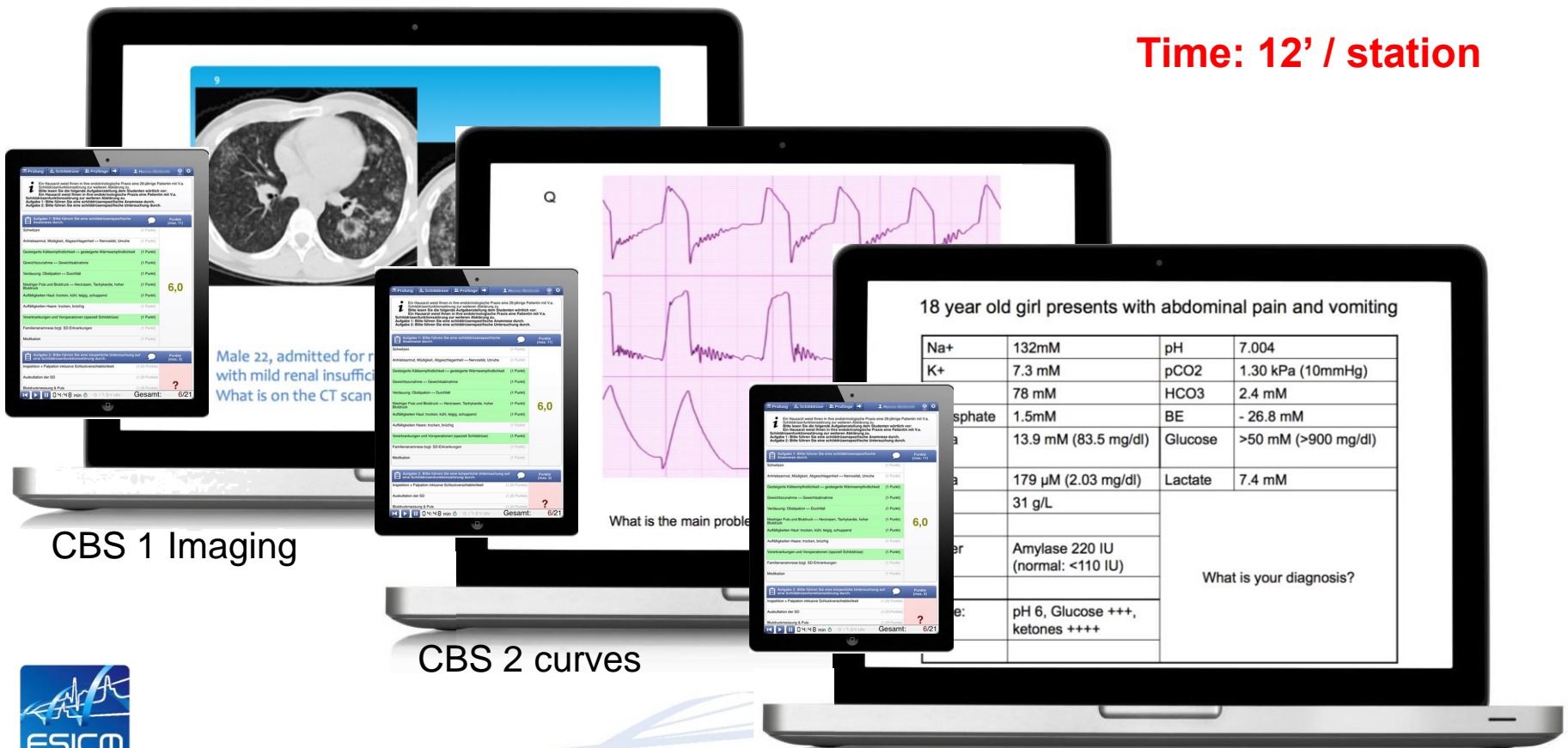- Prompting 1-2 times

◆ **Examinee**

- Summarize the case upfront (1min.)
- Answer questions, focus on question content, come to the point
- At the end the examinee **can't** go back on missed questions

Computer Based Scenarios

◆ **Three OSCE stations** each one with a power point presentation including either images, curves or biochemical scenarios and an iPad for recording

Time: 12' / station

CBS 1 Imaging

CBS 2 curves

CBS 3 biochemistry

18 year old girl presents with abdominal pain and vomiting

Na+	132mM	pH	7.004
K+	7.3 mM	pCO2	1.30 kPa (10mmHg)
	78 mM	HCO3	2.4 mM
sphate	1.5mM	BE	- 26.8 mM
a	13.9 mM (83.5 mg/dl)	Glucose	>50 mM (>900 mg/dl)
a	179 µM (2.03 mg/dl)	Lactate	7.4 mM
	31 g/L		
er	Amylase 220 IU (normal: <110 IU)		What is your diagnosis?
e	pH 6, Glucose +++, ketones ++++		

Male 22, admitted for r... with mild renal insuffici... What is on the CT scan...

What is the main probl...

The electronic answer sheet (iPad)

◆ **Strengths**

  ▪ User friendly layout

  ▪ QR-code scanning for fast and easy identification of students and OSCE stations

  ▪ Easy overview of candidate performance and exam result

  ▪ Reduction of errors rate due to automatic export of the results

  ▪ Harness the full potential of an app by integrating it with a central data management system

Closing the loop within the the Exam Process

Items Management System (IMS)

EDIC part 2: the electronic answer sheet

◆ Allows a high quality and standardized exam using a web based fully integrated data management system

◆ Grants high process safety decreasing the likely hood for errors and hence regress opportunity for candidates

◆ Helps to lower process costs → low exam fee

Item creation

Pre-Review

Exam delivery

Test-statistical analysis

Post-Review

Item Sharing

IMS²

www.esicm.org

Using iPad App (tOSCE)
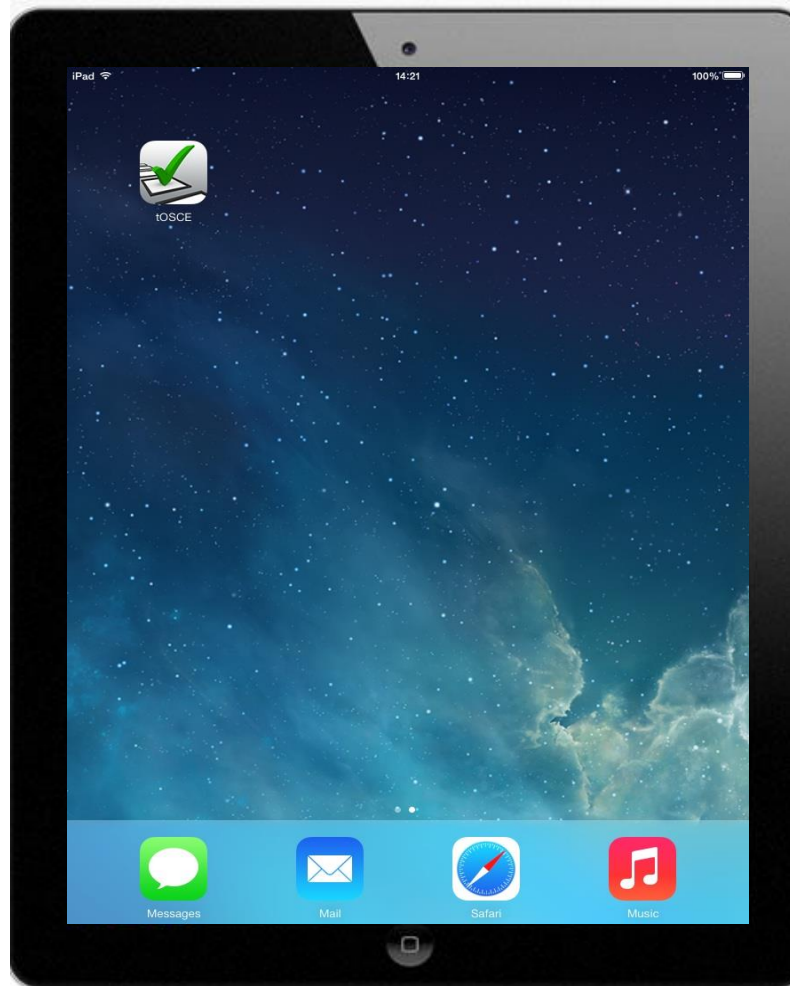
◆ **tOSCE app:**

■ Tablet-based Objective Structured Clinical Examination

Import an Exam missing the Examinees

Start the app

Make sure you are connected to the Internet
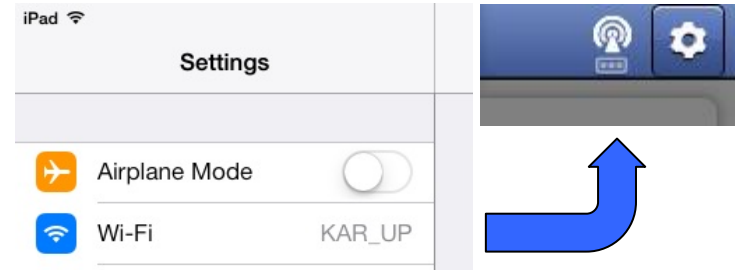
Go to "Exam„
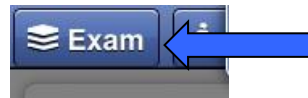
Click on the exam "EDIC II 20…." to download it
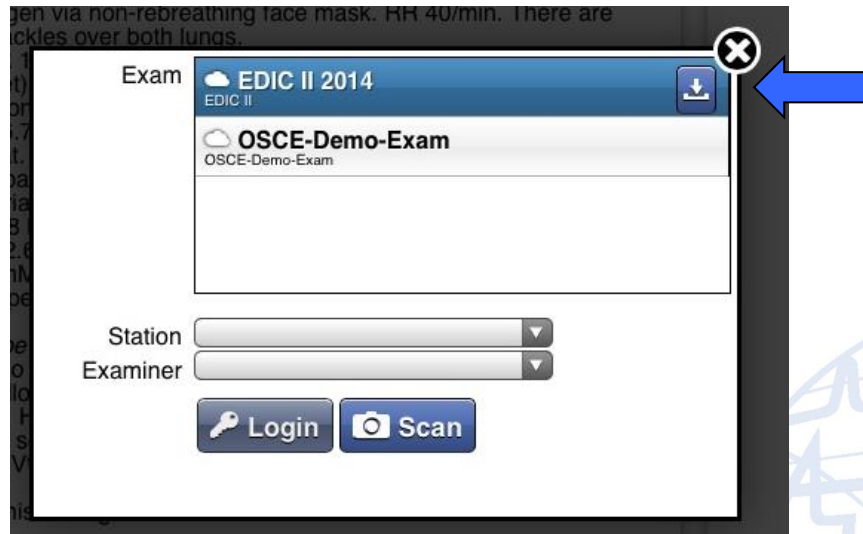
Select the exam station and the examiner

Click on the station bar

Stations

- Scan examiner
- CBS 2 - Curves
- CCS1 - GBS
- CBS 1 - Imaging
- CCS 2 - Sepsis
- CCS 3 - Aortic Dissection
- CBS 3 - Biochemistry

- Double click on scan examiner
- **Scan Interviewer's QR-code**

New examiner: Tero ALA-KOKKO

Name of the interviewer pops up for a few seconds

- **Repeat this each time the interviewer change**

Select the correct examinee
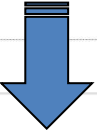
Scan QR code of examinee

Group G1 – Candidate Nr 5

Oscier Chris

Check!

OSCIER,
Chris
(ZRH25665)
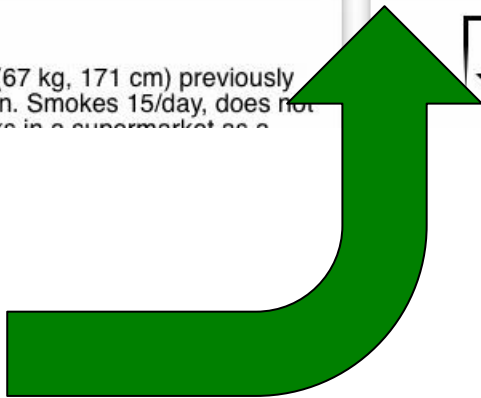
Check!

Selectection of the correct answer

Task 1: 19 y.o. with TBI
What is the diagnosis? How do you manage this patient?

Cerebral salt-wasting syndrome

Replace NaCl (anyhow: i.v.

Fludrocortisone

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What is the diagnosis? How do you manage this patient?

Cerebral salt-wasting syndrome

Replace NaCl (anyhow: i.v., NG)

Fludrocortisone

Click on the correct answer/s if given

To remove or correct click on the correct answer/s again

Task
What is the diagnosis? How do you manage this patient?

Cerebral salt-wasting syndrome

Replace NaCl (anyhow: i.v., NG)

Fludrocortisone

This warning sign indicates that there are no information for this examinee on how he/she performed in this task.

Task 1: 19 y.o. with TBI
What is the diagnosis? How do you manage this patient?

Cerebral salt-wasting syndrome

Replace NaCl (anyhow: i.v., NG)

Fludrocortisone

The examiner cannot finish the exam if there is a warning sign on minimum one task!

23

During the Examination: warning signs

In the case, that the examinee has given no answer select and then deselect an answer

Click **twice** on an answer!

Once to activate and once to remove → this will remove the warning sign

Click on the bubble!

Write **„zero"** and
→ save comment

Exam screen shot

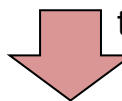# Transmission of the data to the tOSCE server

◆ While the iPad is connected to the internet connection data are continuously transmitted to the exam server located in Heidelberg
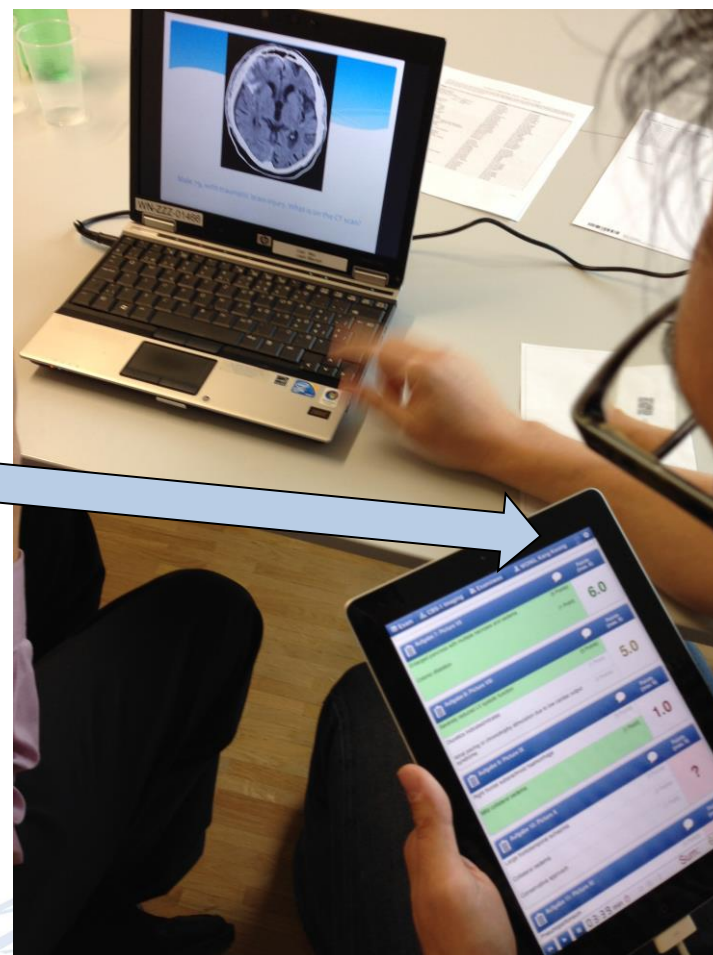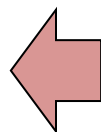
Number of packages to be transmitted
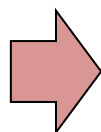
transmission

All packages have been transmitted

Transmission of back up scree shots to the tOSCE server

◆ Back up screenshots are manually transmitted to the server at the end of the exam

Solving Problems

iPad without energy, totaly unresponsive or any other problem which does not allow to use the iPad anymore:

In that case please use the reserve answer sheets.

Station no. 1: CBS 1_Imaging_Nov2015

Checklist

Please do not lose this checklist!

Name of examiner	
Name of student	
Date	

Task 1: Picture 1: Plain Film Abdomen

Dilated caecum main most relevant finding (or megacolon)

Diagnosis of concern: bowel ischaemia

Immediate laparotomy

Needs CT abdomen

Task 2: Picture 2: CXR Cystic Fibrosis

Left lower lobe atelectasis

Cystic bullae visible throughout left lung field and possibility of left lo abscess

Bronchoscopy and Lavage (sample and possible opening up lower

Right lung infiltrate

CT scan thorax

Task 3: Picture 3: CXR and CT Mediastinal Mass

(3 Points)

☒ Points (max. 14)

EDIC II, Seite 1 von 6

Reserve answersheet for: Nr. 61

EDIC II

1. ☐ CAP   ☐ Severe Sepsis
   ☐ Acute Respiratory Failure

2. ☐ Intubate   ☐ Cultures and antibiotics
   ☐ Fluids   ☐ Insert Central Venous Catheter

3. ☐ Controversial in CAP (higher failure rate compared to COPD and pulmonary oedema)   ☐ Indicated in immunocompromised patients
   ☐ Unlikely to suceed in shocked patients

4. ☐ Lactate dynamics   ☐ Urinary output

Training with MOCK EXAM
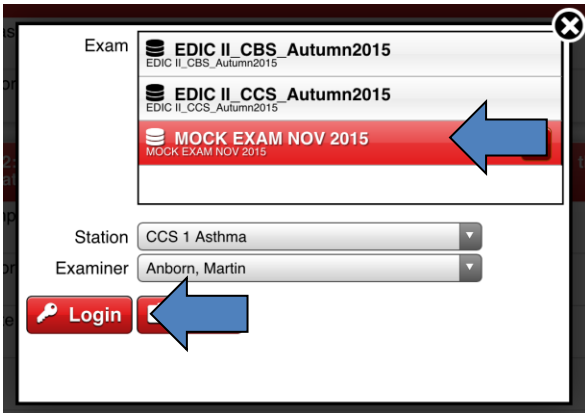
Using this document you can test all your OSCE-app features with the exception of the QR-code to select the appropriate CCS or CBS or examinee

EDIC part 2: An OSCE-exam using iPads

EDIC part 2
Zürich 2014

Thank you for your attention

ESICM
EUROPEAN SOCIETY OF
INTENSIVE CARE MEDICINE