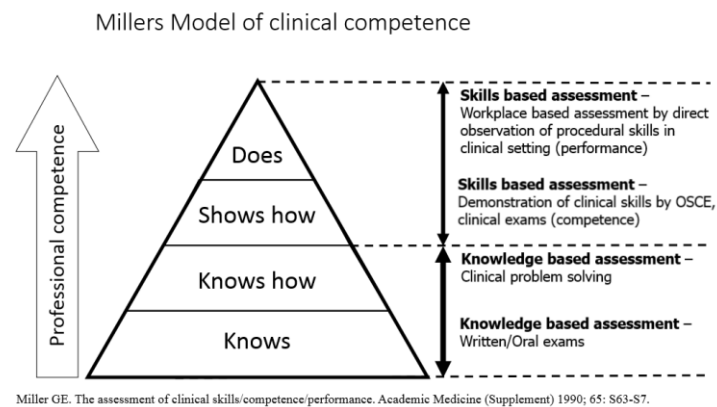


ERS training programme Endobronchial ultrasound (EBUS) – Part 2

LEARNING OUTCOMES

Building on the knowledge gained in part 1 of the training programme this part will further develop the skills and attitudes required to independently perform EBUS.

Part 2 of the EBUS training programme will cover all learning outcomes in the curriculum up to the 'knows how' and 'shows how' (level 2-3) of the Millers Model of clinical competence.



TEACHING AND LEARNING METHODS

Directed learning
Self-regulated learning
Independent learning
Observation of EBUS procedures in a clinical setting

ASSESSMENTS

EBUSAT and direct observation

AMSTERDAM

TBD

ANCONA

Thursday	Active clinical observation	
09:00 – 12:30	Observation and discussion of EBUS procedures	S.Gasparini, L. Zuccatosta
	Simulator training	
13:00 – 14:30	Introduction to the procedure and the simulator	S.Gasparini, L. Zuccatosta
14:30 – 17:00	Directed, self-regulated learning	Simulator assistant S. Gasparini, L. Zuccatosta, F. Gonelli, L. Cirilli,

ERS training programme Endobronchial ultrasound (EBUS) – Part 2

		F. Porcarelli
Friday	Active clinical observation	
09:00 – 12:30	Observation and discussion of EBUS procedures	S.Gasparini, L. Zuccatosta
	Simulator training & assessment	
13:00 – 15:30	Directed self-regulated learning	Simulator assistant S. Gasparini, L. Zuccatosta, F. Gonelli, L. Cirilli, F. Porcarelli
15.30-16.15	Test and certification (participant 1)	S.Gasparini, L. Zuccatosta
16.15-17.00	Test and certification (participant 2)	S.Gasparini, L. Zuccatosta

ATHENS

Thursday	Active Clinical observation	
09:00 – 12:30	Observation and discussion of EBUS procedures	Gr. Stratakos, S. Chrysikos
	Simulator training & assessment	
13:00 – 14:30	Introduction to the procedure and the simulator	Gr.Stratakos S. Chrysikos
14:30 – 17:00	Directed, self-regulated learning	Gr. Stratakos S. Chrysikos N.Anagnostopoulos Ph.Emmanouil
Friday	Simulator training & assessment	
9:00 – 12:30	Observation and discussion of EBUS procedures	Gr. Stratakos Ph. Emmanouil
13:00 – 15:30	Directed, self-regulated learning	Simulator assistant S. Chrysikos, N.Anagnostopoulos, Ph.Emmanouil
15:30 – 16:15	Test and certification (participant 1)	Gr.Stratakos, S.Chrysikos
16:15 – 17:00	Test and certification (participant 2)	Gr.Stratakos, S.Chrysikos

COPENHAGEN

Monday	Simulator training (CAMES)	
13:00 – 14:30	Introduction to the procedure and the simulator	Paul Frost Clementsen
14:30 – 17:00	Directed, self-regulated learning	Simulator assistant
Tuesday	Simulator training & assessment (CAMES)	
09:00 – 12:30	Directed, self-regulated learning	Simulator assistant
13:00 – 13:30	Test and certification (participant 1)	Paul Frost Clementsen

ERS training programme Endobronchial ultrasound (EBUS) – Part 2

13:30 – 14:00	Test and certification (participant 2)	Paul Frost Clementsen
Wednesday	Active clinical observation (Bispebjerg University Hospital)	
08:00 – 15:00	Active observation of procedures in a clinical setting	

HEIDELBERG

Tuesday	Active clinical observation	
09:00 – 12:30	Active observation and discussion of EBUS procedures	F. Herth, M. Schuhmann
	Simulator training	
13:00 – 14:30	Introduction to the procedure and the simulator	F. Herth, M. Schuhmann
14:30 – 17:00	Directed, self-regulated learning	Simulator assistant
Wednesday	Simulator training & assessment	
09:00 – 15:30	Directed, self-regulated learning	Simulator assistant
15:30 – 16:15	Test and certification (participant 1)	F. Herth, M. Schuhmann
16:15 – 17:00	Test and certification (participant 2)	F. Herth, M. Schuhmann

ERS training programme Endobronchial ultrasound (EBUS) – Part 2

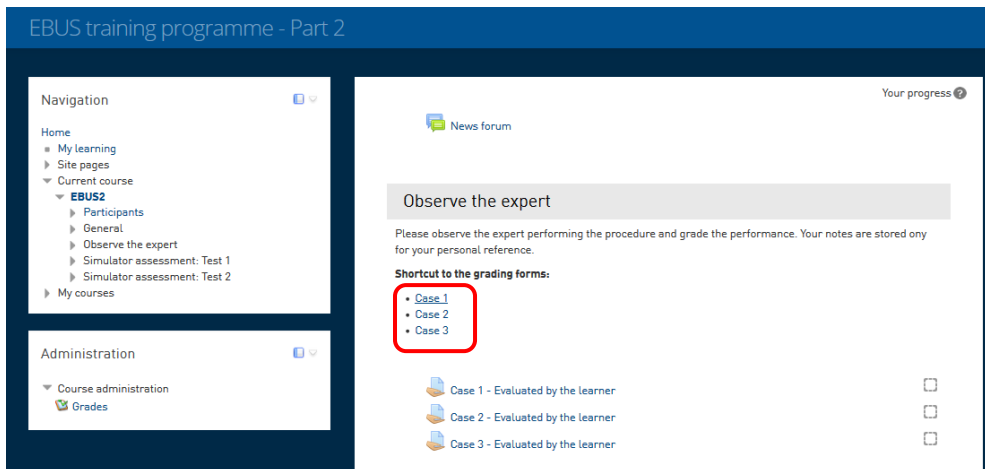
PROGRAMME SESSION DESCRIPTION:

ACTIVE CLINICAL OBSERVATION

This part of the training allows you to see the EBUS procedure in a real life setting. The teacher (expert) should take time prior to the procedure to talk you through the indications, the planning of the procedure and how the patient will be prepared for the procedure.

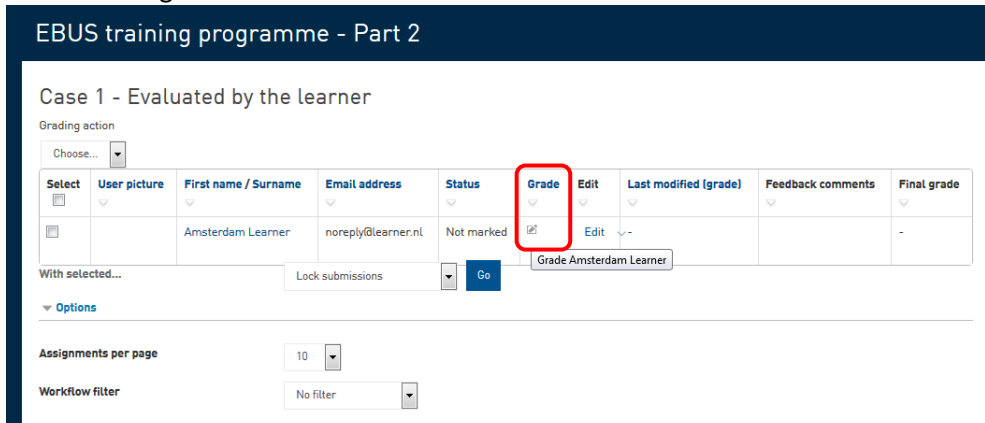
To ensure that you make the most of this active observing opportunity, you will be asked to rate the teachers performance on **three cases** using the EBUSAT framework (directly in the assessment platform). You will also have the opportunity to note down any comments or reflections you have during the procedure to discuss with the teacher at an appropriate moment during or after the procedure. Participants should enter this data onsite and in any case no longer than 5 days after the end of the course. This is a requirement for participants to pass Part 2 and be eligible to go on with Part 3 of the training programme. Detailed instructions on how to enter the necessary data follow:

1. Please access the platform using your personal login:
<http://education.ersnet.org/course/view.php?id=16>
2. Within the first module, choose the case that you want to rate:



The screenshot shows the 'EBUS training programme - Part 2' interface. On the left is a navigation menu with options like 'Home', 'My learning', 'Site pages', 'Current course', 'EBUS2', 'Participants', 'General', 'Observe the expert', 'Simulator assessment: Test 1', 'Simulator assessment: Test 2', and 'My courses'. Below that is an 'Administration' section with 'Course administration' and 'Grades'. The main content area is titled 'Observe the expert' and includes a 'News forum' icon. Below the title, it says 'Please observe the expert performing the procedure and grade the performance. Your notes are stored only for your personal reference.' There is a 'Shortcut to the grading forms:' section with a red box around a list of 'Case 1', 'Case 2', and 'Case 3'. Below this list are three 'grade' icons, each with a corresponding case name and 'Evaluated by the learner' text.

3. Click on the 'grade' icon:



The screenshot shows the 'Case 1 - Evaluated by the learner' grading interface. At the top, it says 'Case 1 - Evaluated by the learner'. Below that is a 'Grading action' dropdown menu. The main part of the interface is a table with the following columns: 'Select', 'User picture', 'First name / Surname', 'Email address', 'Status', 'Grade', 'Edit', 'Last modified (grade)', 'Feedback comments', and 'Final grade'. The 'Grade' column has a red box around it, and a 'Grade Amsterdam Learner' button is visible below the table. Below the table, there are 'Options' for 'Assignments per page' (set to 10) and 'Workflow filter' (set to 'No filter').



ERS training programme Endobronchial ultrasound (EBUS) – Part 2

4. Complete all 12 criteria (lines) of the grading table

Grade

Grade

Grade: Please evaluate the actions of the expert.
You can add comments for your personal reference.

When you have completed the grading, please change the "Marking workflow state" to "Marking completed"

Insertion of the endoscope (incl. passage of vocal cords)	1	2	3	4	5	
	Unable to insert endoscope 1 points	2 points	Needs several attempts to insert endoscope 3 points	4 points	Perfect insertion of endoscope at first attempt 5 points	
Presentation of region 4 L (including aorta & a.pulm)	1	2	3	4	5	
	Not visualized 1 points	2 points	Visualized with difficulty or badly presented 3 points	4 points	Perfectly visualized with apparent ease 5 points	
Presentation of region	1	2	3	4	5	

5. Scroll down to "Marking workflow state" and
 - a. Change the 'Marking workflow state' to 'Released'
 - b. Add any comment or reflection that you want save for your personal use
 - c. Click 'Save changes'

Marking workflow state Released

Allocated Marker Pascal Kurosinski [ERS]

Current grade in gradebook 4.00

Feedback comments

really an expert

Notify students No

Save changes Cancel

Back

6. Click 'Continue', scroll down and click 'Back to the course homepage'.



ERS training programme Endobronchial ultrasound (EBUS) – Part 2

7. Participants are recommended to enter the required data during their training onsite. Should it not be possible, please use the below paper form for your reference and transfer the data to the online platform as soon as possible.

	Performed by supervisor	Performed with guidance	Performed by trainee with no or minimal guidance				
Insertion of the endoscope (incl. passage of vocal cords)	<input type="checkbox"/>	<input type="checkbox"/>	1 Unable to insert endoscope	2	3 Needs several attempts to insert endoscope	4	5 Perfect insertion of endoscope at first attempt
Presentation of:							
region 4 L	<input type="checkbox"/>	<input type="checkbox"/>	1	2	3	4	5
region 7	<input type="checkbox"/>	<input type="checkbox"/>	1	2	3	4	5
region 10/11L	<input type="checkbox"/>	<input type="checkbox"/>	1	2	3	4	5
region 10/11R	<input type="checkbox"/>	<input type="checkbox"/>	1	2	3	4	5
Azygos vein	<input type="checkbox"/>	<input type="checkbox"/>	1	2	3	4	5
region 4 R	<input type="checkbox"/>	<input type="checkbox"/>	1 Not visualized	2	3 Visualized with difficulty or badly presented	4	5 Perfectly visualized with apparent ease
Orientation overall	<input type="checkbox"/>	<input type="checkbox"/>	1 Totally unacceptable investigation	2	3 Acceptable but unsystematic investigation	4	5 Systematic and thorough investigation demonstrating perfect knowledge of the anatomy
Biopsy sampling: Positioning of transducer	<input type="checkbox"/>	<input type="checkbox"/>	1 Major flaws in positioning	2	3 Some problems with positioning	4	5 Perfect positioning of transducer every time
Biopsy sampling: Use of sheath	<input type="checkbox"/>	<input type="checkbox"/>	1 Sheath is used incorrectly with great risk of scope damage	2	3 Insecure localization of the sheath during the procedure	4	5 Perfect use of sheath
Biopsy sampling: Use of needle	<input type="checkbox"/>	<input type="checkbox"/>	1 Targeted sites are missed and/or important structures are damaged	2	3 Insecure use of needle with a few errors	4	5 Perfect use of needle in every procedure
Biopsy sampling overall	<input type="checkbox"/>	<input type="checkbox"/>	1 Biopsies performed with major risk to the patient/equipment	2	3 Possibility of inadequate biopsies due to insufficient technique	4	5 Perfect sampling with excellent technique

ERS training programme Endobronchial ultrasound (EBUS) – Part 2

SIMULATION BASED TRAINING

After the introduction to the simulated EBUS procedure, you will have the opportunity to practice the EBUS procedure on the simulator. During the self-training session, you will follow the programme that is provided, completing the tasks and cases on the EBUS module. A training assistant will be available for support and guidance.

SIMULATED EBUS ASSESSMENT

The test consists of 2 EBUS procedures on simulator patient cases. The participant will have to perform a complete procedure including introduction of the scope, identification of the six anatomical landmarks in the correct order, checking for enlarged lymph nodes and obtaining two biopsies from one of the stations.

The targeted goal is to perform the procedure consistently and in a secure fashion in less than 10 minutes. You will have a maximum of 2 opportunities to pass the test onsite. If the assessment is failed you will need to resit part 2 of the training programme.