

ERS Training programme
Endobronchial ultrasound - Part 1
Online modules

Module number	Module	Faculty member	Syllabus item
1	Lymph node map	Clements/ Konge	1
2	Mapping in the airways	Clements/ Konge	2
3	Positron emission tomography – computed tomography (PET-CT)	Heussel	3
4	Indication assessment	Eberhardt	4
5	Planning of the procedure & preparation of the patient and monitoring	Clements	5, 6
6	EBUS	Herth	11
7	EUS-B	Clements	12
8	Complications	Kontogianni	15

Please allow approximately 20-30 minutes to complete each module.

Please note that the online modules should be completed before attending the course in Heidelberg. The modules will be available on the [Learning Resources website](#) 4 weeks prior to the course taking place.

ERS Training programme
Endobronchial ultrasound - Part 1
Onsite programme

Day 1 – Thoraxklinik Heidelberg - Tuesday, 14 March 2023

	Min		Format	Faculty member	Syllabus item
08:30-09:00	30'	Course registration			K. Heiler
09:00-09:05	5'	Welcome and introduction		Organising committee	
09:05-09:30	25'	Introductory lecture	Lecture	F. Herth	1-6
Session 1 Interactive cases					
09:30-09:45	15'	Case1 – Nodal staging of Lung Cancer	Case example	K. Kontogianni	4, 12 <i>incl. 1-6</i>
09:45-10:00	15'	Case 2 – Reading PET-CT	Case example	C. Heussel	4, 13 <i>incl. 1-6</i>
10:00-10:15	15'	Case 3 – Diagnosing central lung tumours	Case example	J. Annema	4, 12 <i>incl. 1-6</i>
10:15-10:30	15'	Case 4 – Sarcoidosis and/or TBC	Case example	A. Rozman	4, 12 <i>incl. 1-6</i>
10:30-11:00	30'	Coffee/Tea Break			
Session 2 Technique and performance					
11:00-11:30	30'	EBUS technique and performance, including advanced sampling of mediastinum (histology needles, miniforceps and cryonodal biopsy)	Lecture	A. Rozman	4, 6, 11, 12
11:30-12:00	30'	EUS (B) technique and performance	Lecture	J. Annema	11, 13, 14, 15

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12:00-12:30	30'	EBUS (B) training and simulation	Lecture	F. Herth	12
12:30-13:30	60'	Lunch Break			
Session 3 Workshops 13:30 – 17:00					
The participants will be divided into groups of 10 and will rotate the four workshops. Each workshop is repeated four times.					
	45'	Workshop 1 – EBUS/ EUS-B. Cases discussions/ practice – everything you always wanted to ask	Workshop	J. Annema	11 incl. Aspects of 1-15
	45'	Workshop 2 – Cytopathology. Specimen handling and microscopy of TBNA/ FAN aspires will be discussed. Test your skills interactively at the multi-head microscope.	Workshop	Wiebel/ M. Schellenberg	14, 16, 17
	30'	Coffee/Tea Break			
	45'	Workshop 3 Equipment handling (Scope and processor knobology + needle handling) Small team-based simulations of the TBNA technique will be performed on models. Acquaintance with different needle types	Workshop	J. Brock and A. Rozman	9, 10, 11
	45'	Workshop 4 Simulation All participants will get supervised hands-on experience with virtual-reality simulators for practising EBUS	Workshop	K. Kontogianni	12
17:00		Concluding remarks - Course organisers			
19:00-late		Drinks and course dinner for faculty and participants in old town of Heidelberg			

Day 2 - Thoraxklinik Heidelberg - Wednesday, 15 March 2023

	Min		Format	Faculty member	Syllabus item
Session 4					
Live demo + patient handling					
08:30-08:45		Coffee/Tea			
08:45-09:30	45'	Live demo 1 EBUS/ EUS-B PRE-PROCEDURE scans + endoscopy plan	Chairs	J. Annema and S. Dittrich	1, 2, 3, 4, 5, 6
		PROCEDURE Including: Sedation used, interpretation of the endoscopic ultrasound, scope and processor knobology, needle handling, EBUS procedure and specimen handling.	Live demo	F. Herth and HD faculty	7, 8, 9, 10, 11, 13, 14, 15
		POST-PROCEDURE evaluation + feedback	Chairs	J. Annema	16, 17
09.30-10:00	30'	Preparation of the patient	Lecture	J. Brock	
Coffee/Tea Break					
10:00-10:30	30'				
10:30-11:15	45'	Live demo 2 EBUS PRE-PROCEDURE scans + endoscopy plan	Chairs	A. Rozman and S. Dittrich	1, 2, 3, 4, 5, 6
		PROCEDURE Including: Sedation used, interpretation of the endoscopic ultrasound, scope and processor knobology, needle handling, EBUS procedure and specimen handling.	Live demo	K. Kontogianni and HD faculty	7, 8, 9, 10, 11, 13, 14, 15
		POST-PROCEDURE evaluation + feedback	Chairs	A. Rozman	16, 17

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11:15-11:45	30'	Sedation for endosonography	Lecture	M. Scheiner	
11:45-12:15	30'	Radial EBUS and peripheral lesions	Lecture	F. Herth	11
12:15-13:15	60'	Lunch Break			
Session 5		Live demo/ indication- complication assessment			
13:15-14:00	45'	Live demo 3 EBUS/ EUS-B PRE-PROCEDURE scans + endoscopy plan	Chairs	K. Kontogianni and S. Dittrich	1, 2, 3, 4, 5, 6
		PROCEDURE Including: Sedation used, interpretation of the endoscopic ultrasound, scope and processor knobology, needle handling, EBUS procedure and specimen handling.	Live demo	J. Brock and HD faculty	7, 8, 9, 10, 12, 13, 14
		POST-PROCEDURE. evaluation + feedback	Chairs	K. Kontogianni	16, 17
14:00-14:20	20'	E(B)US Complications	Lecture	K. Kontogianni	
14:20-14:40	20'	Setting up a successful E(B)US service	Lecture	J. Brock	15
14.40-15:00	20'	Next steps in training programme & overview of Part 2 & Part 3	Lecture	J. Annema	
15:00-15:30	30'	Quiz/ Question and answer session	Discussion	All faculty	
		End of official programme			
15:30-16:30	60'	Drinks and bites <i>Interaction between faculty, participants and sponsors</i>	Informal get together	Participants and Faculty	

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