

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)	Adam	3
4	Indication assessment	Annema	4
5	Planning of the procedure & preparation of the patient and monitoring	Clements	5, 6
6	EBUS	Herth	11
7	EUS-B	Annema	12
8	Complications	Schuhmann	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, 19 February 2019

	Min		Format	Faculty member	Syllabus item
08:30-09:00	30'	Course registration		J. Kaus	
09:00-09:05	5'	Welcome and introduction		Organising committee	
09:05-09:30	25'	Introductory lecture	Lecture	F. Herth	1, 2, 3, 4, 5, 6
Session 1		Interactive cases			
		Chairs: A. Bugalho, M. Schuhmann	Voting pads		
09:30-09:45	15'	Case1 – Nodal staging of Lung Cancer	Case example	F. Herth	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 lung tumours	Case example	J. Annema	4, 12 <i>incl. 1-6</i>
10:15-10:30	15'	Case 4 – Sarcoidosis	Case example	A. Bugalho	4, 12 <i>incl. 1-6</i>
10:30-11:00	30'	<i>Coffee break</i>			
Session 2		Technique and performance			
		Chairs: J. Annema, P. Clementsen			
11:00-11:30	30'	EBUS technique and performance	Lecture	M. Schuhmann	4, 6, 11, 12
11:30-12:00	30'	EUS (B) technique and performance	Lecture	J. Annema	11, 13, 14, 15
12:00-12:30	30'	EBUS (B) training and simulation	Lecture	P. Clementsen	12
12:30-13:30	60'	<i>Lunch</i>			

View for more information www.ersnet.org/ebus

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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 M. Schuhmann	11 incl. Aspects of 1-15
	45'	Workshop 2 – Cytopathology. Specimen handling and microscopy of TBNA/ FAN aspires will be discussed. Test your own skill at the multi head microscope in an interactive manner.	Workshop	Dr Wiebel	14, 16, 17
	30'	<i>Tea break</i>			
	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	P. Clementsen A. Bugalho	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, participants and sponsors in old town Heidelberg			

Day 2 - Thoraxklinik Heidelberg - Wednesday, 20 February 2019

Session 4	Min	Live demo + patient handling	Format	Faculty member	Syllabus item
08:30-08:45		Coffee/ tea			
08:45-09:30	45'	Live demo 1 EBUS/ EUS-B PRE-PROCEDURE scans + endoscopy plan	Chairs	Annema/Schuhmann	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	Herth/HD faculty	7, 8, 9, 10, 11, 13, 14, 15
		POST-PROCEDURE evaluation + feedback	Chairs	Annema/Schuhmann	16, 17
09.30-10:00	30'	Preparation of the patient	Lecture	P. Clementsen	
10:00-10:30	30'	Coffee break			
10:30-11:15	45'	Live demo 2 EBUS PRE-PROCEDURE scans + endoscopy plan	Chairs	Bugalho/Kontogianni	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	Schuhmann/HD faculty	7, 8, 9, 10, 11, 13, 14, 15
		POST-PROCEDURE evaluation + feedback	Chairs	Bugalho/Kontogianni	16, 17
11:15-11:45	30'	Sedation for endosonography	Lecture	Klar	
11:45-12:15	30'	Specimen handling	Lecture	Wiebel	14

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12:15-13:15	60'	Lunch			
Session 5		Live demo/ indication- complication assessment			
13:15-14:00	45'	Live demo 3 EBUS/ EUS-B PRE-PROCEDURE scans + endoscopy plan	Chairs	Schuhmann/ Clementsens	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	Eberhardt/HD faculty	7, 8, 9, 10, 12, 13, 14
		POST-PROCEDURE. evaluation + feedback	Chairs	Schuhmann/ Clementsens	16, 17
14:00-14:20	20'	E(B)US Complications	Lecture	M. Schuhmann	
14:20-14:40	20'	Setting up a successful E(B)US service	Lecture	F. Herth	15
14.40-15:00	20'	Next steps in training programme & overview of Part 2 & Part 3	Lecture	P. Clementsens/ J. Annema	
15:00-15:30	30'	Quiz/ Question and answer session	Discussion	All faculty	
		End of official programme			
15:30-16:30	60'	<i>Drinks and bites</i> <i>Interaction between faculty, participants and sponsors</i>	Informal get together	Participants and Faculty	