

This competency-based curriculum has been designed by a task force of interventional pulmonology specialists to underline the learning outcomes for medical doctors wishing to become competent in performing endobronchial ultrasound (EBUS). The curriculum forms the foundation of the ERS EBUS training programme that has a recommended duration of 18 months.

#### Target audience:

Qualified medical doctors with previous experience in:

- Performing regular bronchoscopies
- TNM classification of lung cancer
- Staging of patients - oncology and other conditions

The following curriculum outlines the core areas for development including the;

1. **Syllabus** stating the content required for training
2. **Learning outcomes** (knowledge, skills and attitudes) required for each syllabus item. These will guide the trainee and trainer to achieve competencies.

Although not represented in the curriculum matrix the following core areas will be introduced at a high level and will be discussed in more detailed in further publications.

3. **Teaching and learning activities** the programme prescribes a teaching method appropriate to the learning outcome. This may include informal and/or formal learning opportunities suitable for post graduate/post specialty learning environments.
4. **Level of assessment and assessment methods** based on Miller's model of clinical competence, and includes methods which are applicable across all training centre networks irrespective of geographical location. Assessments are linked to the learning outcomes and the level of assessment required
5. **Faculty development activities** outlines the professional activities that key teaching faculty need to develop to ensure the high level and standardisation of training.

#### Teaching and learning activities

This curriculum has been designed as a complete post-graduate training programme in EBUS. Following completion of this training programme, the participant should be able to:

- Independently assess patient history and results
- Identify indications and contraindications
- Perform independent procedures
- Interpret results and draw conclusions

The teaching and learning activities have been separated into 3 parts.

**Part 1** requires participants to follow online self-directed modules comprised of webcasts, self-assessment quizzes, and interactive maps. Next participants attend a physical course where the content is revised, EBUS equipment introduced and a demonstration of live procedures is performed.

**Part 2** comprises of intensive simulation based training and active clinical observation.

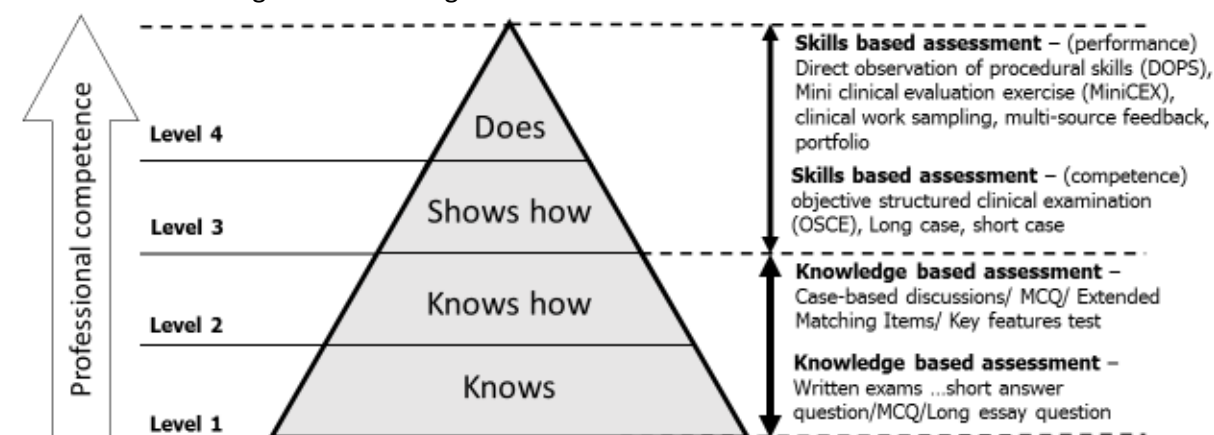
**Part 3** sees participants starting to perform procedures in a supervised environment, participants will be asked to document procedures in an online portfolio.

#### Level of assessment and assessment methods

During the design of this curriculum, task force members considered appropriate assessment methods using Miller's model of clinical competence (below). Selection of appropriate assessment methods fit for purpose are essential to the validity of assessments and to predict whether a trainee is competent to practice.

The ERS EBUS training programme is developed to guide the trainer through the levels of professional competence with:

- Part 1 assessing level 1-2 "knows" and "knows how"
- Part 2 assessing level 2-3 "knows how" and "shows how"
- Part 3 assessing level 4 covering "does".



Adapted figure from Miller's model of clinical competence [1], and organisation of assessment methods taken from Zubair [2].

#### Faculty development activities

To implement this curriculum and subsequent training programme faculty members are required to implement a number of teaching, learning and assessment methods. To ensure that the faculty are prepared the following development activities are recommended.

- How to assess a video procedure
- How to assess a portfolio
- How, when, where to give constructive feedback
- How to set a pass/fail limit
- Different methods of assessment
- How to assess a simulated procedure
- How to mentor a learner
- Giving feedback
- How to assess a practical skills method
- How to write good questions
- How to teach on a simulator

**Note:** This document is a supplement document to the published *Breathe* article explaining the process and methodology of the curriculum development.

N°	Syllabus item	<b>Knowledge</b> This section includes all information and facts a learner should be familiar with to allow them to perform EBUS.	<b>Skills</b> This section includes psychomotor-physical skills involving coordination of brain and muscular activity.	<b>Attitudes</b> This section includes attitudes and behaviours s the participant should possess in order to improve patient care and perform EBUS. Where applicable the corresponding roles are specified using the CanMEDS 2015 framework.
----	---------------	--	---	---

**PRE-PROCEDURE**

1	<b>Lymph node map</b>	According to the latest version of the IASLC lymph node map: <ul style="list-style-type: none"> <li>• List the name of the lymph node stations 1-14</li> <li>• Describe the anatomical borders of the lymph nodes 1-14</li> <li>• Classify lymph node stations N1, N2 and N3 nodes according to tumour locations (right and left side)</li> <li>• Identify the mediastinal and hilar lymph node stations</li> </ul>		<ul style="list-style-type: none"> <li>• Maintain and enhance professional activities through ongoing learning <b>SCHOLAR</b></li> </ul>
2	<b>Mapping in the airways</b>	According to the latest version of the IASLC lymph node map: <ul style="list-style-type: none"> <li>• List the anatomical landmarks found in the airways <i>e.g. main carina, segmental bronchi</i></li> <li>• Describe usual EBUS-TBNA sites for each nodal stations <i>e.g. subcarinal nodes; medial side of right or left main stem bronchus</i></li> <li>• Describe the location of the anatomical landmarks in the airways</li> <li>• Identify the anatomical landmarks found in the airways during bronchoscopy</li> </ul>		<ul style="list-style-type: none"> <li>• Maintain and enhance professional activities through ongoing learning <b>SCHOLAR</b></li> </ul>
3	<b>Computed tomography (CT) and and/or Positron Emission tomography – computed tomography (PET-CT)</b>	<ul style="list-style-type: none"> <li>• Study and understand (PET)-CT images</li> <li>• Identify the mediastinal and hilar lymph nodes using (PET)-CT scans - according to the definitions by IASLC.</li> <li>• Distinguish lymph nodes from other structures</li> <li>• Describe how to measure lymph node size on (PET)-CT images.</li> <li>• Describe characteristics of each lymph nodes <i>e.g. necrotic, conglomerated, extra nodal invasion, infiltrative.</i></li> <li>• Check pulmonary parenchymal lesions that can be sampled by EBUS-TBNA or EUS-B-FNA.</li> <li>• Check for pathological findings below the diaphragm including the left adrenal gland</li> <li>• Interpret and compile relevant information found in scans into a patient plan</li> <li>• Relate the relevant information to the clinical setting</li> </ul>	<ul style="list-style-type: none"> <li>• Read and interpret (PET)-CT</li> <li>• Design a diagnostic plan using interpretations from (PET)-CT</li> <li>• Present a diagnostic plan to a MDT</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate a commitment to patient care by ensuring that all knowledge is kept up to date <b>PROFESSIONAL/SCHOLAR</b></li> <li>• Participate effectively and appropriately in an interprofessional health care team to obtain information for diagnostic purposes <b>COLLABORATOR</b></li> <li>• Establish and maintain clinical knowledge, skills and attitudes appropriate to performing EBUS <b>MEDICAL EXPERT</b></li> </ul>
4	<b>Indication assessment</b>	According to current international guidelines: <ul style="list-style-type: none"> <li>• Describe the accepted indications to perform EBUS <i>e.g. diagnosing and staging of lung cancer, sarcoidosis, TB and analysis of mediastinal and hilar lymphadenopathy</i></li> <li>• Describe the contraindications for an EBUS procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Report all relevant information from the indication assessment in a clear and logical manner to ensure all colleagues can easily access the information</li> <li>• Perform a clinical assessment of a patient</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise when to involve other professionals in the patient assessment <b>COLLABORATOR</b></li> <li>• Recognise own abilities and when to seek appropriate consultation from other health professionals, recognising the limits of their expertise <b>MEDICAL EXPERT</b></li> <li>• Demonstrate respect for patient taking into consideration ethical practice</li> </ul>

N°	Syllabus item	<b>Knowledge</b> This section includes all information and facts a learner should be familiar with to allow them to perform EBUS.	<b>Skills</b> This section includes psychomotor-physical skills involving coordination of brain and muscular activity.	<b>Attitudes</b> This section includes attitudes and behaviours s the participant should possess in order to improve patient care and perform EBUS. Where applicable the corresponding roles are specified using the CanMEDS 2015 framework.
		<ul style="list-style-type: none"> <li>Critically evaluate clinical and radiological information to ensure that a patient in need of EBUS is correctly referred for the procedure <i>e.g. assess the impact of performing EBUS to the patient</i></li> </ul>		<ul style="list-style-type: none"> <li>Explain to the patient the most appropriate plan based on the clinical assessment <b>COMMUNICATOR</b></li> </ul>
		<ul style="list-style-type: none"> <li>Explain the benefits of using of a combined EBUS and EUS-B procedure</li> </ul>		
5	<b>Planning of the procedure</b>	According to local protocols: <ul style="list-style-type: none"> <li>List the relevant information which should be included in the procedure plan <i>e.g. safety concerns based on history, relevant comorbidities, medication, signed written consent, relevant lab results, sedation, procedure, side and site, informed consent, medical records, medications, allergies, sedation preparation list.</i></li> <li>Based on (PET)-CT, clinical information and the indication assessment identify the need for additional diagnostic procedures <i>e.g. conventional bronchoscopy</i> and identify the order in which the procedures should be undertaken</li> </ul>	<ul style="list-style-type: none"> <li>Design a procedure plan according to local protocols</li> <li>Present all relevant information in a clear and logical manner to the patient and colleagues</li> </ul>	<ul style="list-style-type: none"> <li>Communicate effectively with the patient regarding the indications and contraindications</li> <li>Describe the indication, the procedure, and the procedure-related risks in a manner that is understandable to the patient. <b>COMMUNICATOR</b></li> <li>Collaborate with colleagues who are required to prepare and to assist at the procedure <b>COLLABORATOR</b></li> </ul>
6	<b>Preparation of the patient</b>	According to local protocols and/or national guidelines: <ul style="list-style-type: none"> <li>Evaluate that all relevant information is reviewed before the patient is deemed healthy and suitable to undergo the EBUS procedure <i>e.g. fasting patient/nil by mouth</i></li> </ul>	<ul style="list-style-type: none"> <li>Present all relevant information in a clear and logical manner to ensure all colleagues can easily access the information</li> <li>Inform and discuss with the patient the EBUS procedure</li> <li>Review patient images and consider lab findings to enable full interpretation of patient case prior to procedure</li> <li>Check informed consent form has been provided</li> </ul>	<ul style="list-style-type: none"> <li>Communicate using a patient-centred approach that encourages patient trust and autonomy <b>COMMUNICATOR</b></li> <li>Respond to individual patient health needs and issues as part of patient care <b>HEALTH ADVOCATE</b></li> </ul>
<b>PROCEDURE</b>				
7	<b>Sedation and monitoring</b>	According to local protocol and/or national guidelines patient classification status: <ul style="list-style-type: none"> <li>Classify patients using the ASA classification and identify high risk patients</li> <li>List the required equipment for sedating the patient during the EBUS procedure</li> <li>Explain different types of sedation <i>e.g. NAPS, moderate sedation, and general anaesthesia</i></li> <li>Explain the different anaesthesia agents including dosage and reversal</li> <li>Recognise sedation-related adverse events <i>e.g. over-dosage</i></li> <li>Indicate the management protocol related to common sedation events</li> <li>Evaluate sedation information to ensure adequate monitoring of the patient</li> </ul>	<ul style="list-style-type: none"> <li>Monitor (physically read) the patient's level of oxygen saturation, heart rate and blood pressure</li> <li>Ensure that the patient's intravenous access for administration of sedation is clear throughout the duration of the procedure</li> <li>Adjust the level of sedation according to ASA classification</li> <li>Administer sedative and monitor that the correct level of sedation is maintained during the procedure</li> <li>Respond appropriately to complications that may occur due to the sedation, in order to ensure a high level of patient care</li> <li>Document all monitoring data <i>e.g. record heart rate, blood pressure and oxygen saturation throughout the procedure</i></li> <li>Ensure patient safety throughout the procedure</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate professional commitment to continuous medical education by remaining up to date with current developments in the field <b>PROFESSIONAL/SCHOLAR</b></li> <li>Determine in your team who is responsible for which activity and collaborate harmoniously <b>COLLABORATOR</b></li> </ul>

N°	Syllabus item	<b>Knowledge</b> This section includes all information and facts a learner should be familiar with to allow them to perform EBUS.	<b>Skills</b> This section includes psychomotor-physical skills involving coordination of brain and muscular activity.	<b>Attitudes</b> This section includes attitudes and behaviours s the participant should possess in order to improve patient care and perform EBUS. Where applicable the corresponding roles are specified using the CanMEDS 2015 framework.
8	<b>Interpretation of endoscopic ultrasound</b>	<ul style="list-style-type: none"> <li>Explain the key principles, features and artefacts of basic ultrasound</li> <li>Identify the typical ultrasonic appearance of key anatomical structures</li> <li>Identify the normal anatomical appearance based on the endoscopic view <i>e.g. pattern recognition</i></li> <li>Detect common pathologies <i>e.g. for tumours and enlarged lymph nodes</i></li> <li>Describe typical echo features of malignant and benign lymph nodes</li> </ul>	<ul style="list-style-type: none"> <li>Operate the scope to identify the anatomy and the anatomical landmarks in a systematic order according to local protocols.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate professional commitment to continuous medical education by remaining up to date with current developments in the field <b>PROFESSIONAL/SCHOLAR</b></li> </ul>
9	<b>Scope and processor handling</b>	<ul style="list-style-type: none"> <li>Describe the EBUS scope and processor including use of the EBUS balloon</li> <li>Describe how to position the scope to gain the best viewing angle</li> <li>Explain the significance of how to adjust gain and depth</li> <li>Describe how to enable the Doppler and explain why enabling the Doppler is required</li> <li>Describe how to take images and videos and perform accurate measurements</li> </ul>	<ul style="list-style-type: none"> <li>Operate the scope in a competent manner focussing on safety for the patient and the equipment</li> <li>Demonstrate competent handling of the EBUS balloon <i>e.g. attaching the balloon to the scope and inflation</i></li> <li>Demonstrate functionality of processor and bronchoscope buttons</li> <li>Adjust gain and depth of images to optimise images</li> <li>Enable the Doppler when required</li> <li>Capture and save images and videos</li> <li>Measure key lymph nodes and other important findings</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate professionalism when operating the scope in order to avoid damage to equipment <b>PROFESSIONAL</b></li> </ul>
10	<b>Systematic approach to landmark investigation</b>	<ul style="list-style-type: none"> <li>Using a systematic approach describe how to find the 6 EBUS landmarks (station 4L, station 7, station 10L, station 10R, azygos, station 4R)</li> <li>Using a systematic approach describe how to find the 6 EUS-B landmarks (liver, abdominal aorta, left adrenal gland, station 7, station 4L, station 4R)</li> <li>Explain the importance of working in a systematic manner</li> <li>List the key benefits of working in a systematic manner when performing lymph node investigation</li> </ul>	<ul style="list-style-type: none"> <li>Operate the EBUS scope to perform a thorough and systematic investigation of the 6 EBUS landmarks demonstrating knowledge of the anatomical landmarks</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate professional commitment to consistently using a systematic approach to ensure accurate staging of the patient <b>PROFESSIONAL</b></li> <li>Demonstrate responsibility towards the patients' health by providing the best level of care</li> </ul>
11	<b>EBUS</b>	<ul style="list-style-type: none"> <li>Describe how to introduce the EBUS scope through the mouth, laryngeal mask, endotracheal tube, and tracheotomy.</li> <li>Describe the adequate hand and wrist motions for navigating the scope.</li> <li>Explain how to navigate the EBUS scope to examine the 6 anatomical landmarks in a systematic manner</li> </ul>	<ul style="list-style-type: none"> <li>Pass the EBUS scope through the vocal cords</li> <li>Apply the correct hand motions/position for assessment of each lymph node station and anatomical land mark in a systematic manner</li> <li>Inflate the EBUS balloon to visual lymph node stations</li> <li>Use a balloon in order to improve bronchial wall contact</li> <li>Measure key lymph nodes prior to sampling</li> <li>Based on findings determine a sample order</li> <li>Recognise when patient safety is in jeopardy</li> </ul>	<ul style="list-style-type: none"> <li>Engage in continuous enhancement professional activities through ongoing learning <b>SCHOLAR</b></li> <li>Strive to regularly undertake EBUS procedures to maintain knowledge and skills <b>SCHOLAR</b></li> <li>Work in a collaborative manner with the MDT <b>COLLABORATOR</b></li> <li>Recognise the limitations of a particular procedure</li> <li>Act in a manner that is respectful and in the best interest of the patient <b>PROFESSIONAL</b></li> </ul>

N°	Syllabus item	<b>Knowledge</b> This section includes all information and facts a learner should be familiar with to allow them to perform EBUS.	<b>Skills</b> This section includes psychomotor-physical skills involving coordination of brain and muscular activity.	<b>Attitudes</b> This section includes attitudes and behaviours s the participant should possess in order to improve patient care and perform EBUS. Where applicable the corresponding roles are specified using the CanMEDS 2015 framework.
12	<b>EUS-B</b>	<ul style="list-style-type: none"> <li>Describe how to introduce the EBUS scope into the oesophagus.</li> <li>Describe the adequate hand and wrist motions for navigating the scope.</li> <li>Explain how to navigate the EBUS scope to examine the lymph node locations in a systematic manner</li> </ul>	<ul style="list-style-type: none"> <li>Recognise difficult intubation and take appropriate action</li> </ul>	
13	<b>Needle handling and tissue sampling</b>	<ul style="list-style-type: none"> <li>Explain which nodes to sample, and in which order according to the endoscopy plan and ultrasound findings</li> <li>Explain the systematic approach to taking samples for the staging of lung cancer</li> <li>Discuss the different type of needles recommended for EBUS and EUS-B procedures <i>e.g. type and size</i></li> <li>Explain the different steps in sampling</li> <li>Discuss the minimal number of times a lesion should be sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Decide which size and type of needle to use for the indication</li> <li>Prepare and connect the needle to the scope</li> <li>Position the sheath</li> <li>Manipulate the stylet (depending on the needle type and procedure)</li> <li>Position the needle in the target lesion in real time ultrasound control</li> <li>Remove the stylet</li> <li>Apply suction (when required)</li> <li>Operate the needle up and down in the lesion</li> <li>Stop suction</li> <li>Retract the needle fully in the sheath</li> <li>Retract the sheath</li> <li>Disconnect the sheath and the needle from the endoscope</li> <li>Evaluate the quality of the microscopic sample and adapt the acquisition technique if required</li> <li>Adapt technique based on feedback from the team</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate professional commitment to continuous medical education by remaining up to date with current knowledge of the equipment used.</li> <li>Demonstrate responsibility towards safety in needle handling in regards to both patients, investigation team and equipment. <b>PROFESSIONAL</b></li> <li>Keep up to date with best practice in tissue acquisition and handling <b>SCHOLAR</b></li> <li>Integrate feedback from the team into the performance of the current procedure <b>COLLABORATOR</b></li> </ul>
14	<b>Specimen handling</b>	<p>According to local protocols:</p> <ul style="list-style-type: none"> <li>Describe how to handle specimens for cytology and histology e.g. smear or cell block, microbiology</li> <li>Describe how to acquire and prepare different types of specimens <i>e.g. cell block for molecular analysis</i></li> <li>Explain the value of ROSE</li> </ul>	<p>According to local protocols:</p> <ul style="list-style-type: none"> <li>Place the sample on the glass slide <b>and or</b></li> <li>Put it in a tube suitable for cell block preparation and or microbiology</li> </ul>	<ul style="list-style-type: none"> <li>Recognise the importance of correct specimen handling and collaboration with the pathologist and the microbiologist.</li> <li>Demonstrate a commitment to excellence; continuously reflect on the quality of samples and how to improve the quality of future samples <b>PROFESSIONAL</b></li> </ul>

N°	Syllabus item	<b>Knowledge</b> This section includes all information and facts a learner should be familiar with to allow them to perform EBUS.	<b>Skills</b> This section includes psychomotor-physical skills involving coordination of brain and muscular activity.	<b>Attitudes</b> This section includes attitudes and behaviours the participant should possess in order to improve patient care and perform EBUS. Where applicable the corresponding roles are specified using the CanMEDS 2015 framework.
15	<b>Complications</b>	<ul style="list-style-type: none"> <li>List typical complications which can occur during the EBUS and EUS-B procedures <i>e.g. scope damage, mediastinitis, and sedation complications</i></li> </ul>	<ul style="list-style-type: none"> <li>Identify any arising and manage complication related to the EBUS procedure such as equipment failure, patient distress/deterioration.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate a commitment to patient safety and quality improvement <b>PROFESSIONAL</b></li> </ul>
			<ul style="list-style-type: none"> <li>Identify when equipment fails</li> </ul>	<ul style="list-style-type: none"> <li>Recognise problems/limitations within the current situation in order to anticipate potential limitations.</li> </ul>
			<ul style="list-style-type: none"> <li>Ensure patient safety</li> </ul>	
<b>POST-PROCEDURE</b>				
16	<b>Reporting</b>	<ul style="list-style-type: none"> <li>According to local protocols list key information which should be recorded for each procedure <i>e.g. which lymph nodes punctured, the number of times that they have been punctured, and where the samples have been sent.</i></li> </ul>	<ul style="list-style-type: none"> <li>Present all necessary information from the procedure in an easily accessible format for all professionals involved</li> </ul>	<ul style="list-style-type: none"> <li>Adhere to good reporting practice in an honest and timely fashion.</li> <li>Acknowledge the importance of clear communication for safe interprofessional collaboration and interdepartmental hand-overs.</li> <li>Demonstrate safe handover of care, using both verbal and written communication, during a patient transition to a different stage of care <b>COLLABORATOR/COMMUNICATOR</b></li> <li>Describe clearly and in an accessible manner each procedure including adverse events and complications.</li> <li>Formulate advice and directions in a fashion that is easy to understand and follow by the collaborators <i>e.g. nurses, colleagues, other departments</i> <b>COMMUNICATOR</b></li> <li>Continuously use data for self-reflection.</li> <li>Dedication to honest and open sharing of results for external feedback and possible improvement.</li> <li>Strive to keep improving and avoid arrested development.</li> <li>Recognise own abilities and when to seek appropriate consultation from other health professionals, recognising the limits of their expertise <b>MEDICAL EXPERT</b></li> <li>Recognise practice uncertainty and knowledge gaps <b>SCHOLAR</b></li> <li>Based on the monitoring of results recognise when to involve other professionals to improve future patient care <b>COLLABORATOR</b></li> </ul>
17	<b>Monitoring of results</b>	In relation to the patient:	<ul style="list-style-type: none"> <li>Present all necessary information from the procedure in an easily accessible format for all professionals involved</li> </ul>	<ul style="list-style-type: none"> <li>Practice professional commitment to ensure that results from the procedure are transferred to the MDT</li> </ul>
		<ul style="list-style-type: none"> <li>Interpret the quality and outcomes of procedures, based on the pathological and microbiological results</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that results that are provided to the MDT and further management of the patient is discussed</li> </ul>	<ul style="list-style-type: none"> <li>Continuously use data for self-reflection.</li> </ul>
		<ul style="list-style-type: none"> <li>Interpret results and therapeutic indications and discuss in MDT setting</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that results are correctly recorded following the procedure</li> </ul>	<ul style="list-style-type: none"> <li>Dedication to honest and open sharing of results for external feedback and possible improvement.</li> </ul>
		In relation to the level of care delivered overall by the institution:	<ul style="list-style-type: none"> <li>Evaluate the results in order to improve future patient care and improve</li> </ul>	<ul style="list-style-type: none"> <li>Strive to keep improving and avoid arrested development.</li> </ul>
<ul style="list-style-type: none"> <li>Monitor false negative results/rate in lung cancer staging setting</li> </ul>	<ul style="list-style-type: none"> <li>Present all necessary information in a relevant format</li> </ul>	<ul style="list-style-type: none"> <li>Recognise own abilities and when to seek appropriate consultation from other health professionals, recognising the limits of their expertise <b>MEDICAL EXPERT</b></li> </ul>		

N°	Syllabus item	<b>Knowledge</b> This section includes all information and facts a learner should be familiar with to allow them to perform EBUS.	<b>Skills</b> This section includes psychomotor-physical skills involving coordination of brain and muscular activity.	<b>Attitudes</b> This section includes attitudes and behaviours s the participant should possess in order to improve patient care and perform EBUS. Where applicable the corresponding roles are specified using the CanMEDS 2015 framework.
		<ul style="list-style-type: none"> <li>• Monitor and record and evaluate complications</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate findings in order to improve future patient care and improve</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise practice uncertainty and knowledge gaps <b>SCHOLAR</b></li> </ul>
				<ul style="list-style-type: none"> <li>• Based on the monitoring of results recognise when to involve other professionals to improve future patient care <b>COLLABORATOR</b></li> </ul>

**References:**

1. Miller GE. The assessment of clinical skills/competence/performance. Acad Med 1990; **65**: 63–67.
2. Zubair A, Seng CY, Eng KU. Practical Guide to Medical Student Assessment. Singapore, World Scientific Publishing, 2006.