Guide for assessors

A 3-point scale has been selected. This is to make the assessment as easy as possible, but can of course be discussed. A 5 or 7 point scale allows for greater degree of detail – this only makes sense, however, if the question can be answered in great detail.

Please be very careful about filling out the form and pay special attention to the following pitfalls:

End-aversion bias: Many people are generally reluctant to use the extremes of the scale, which causes responses to clump together in the middle (also called central tendency bias). Avoid giving everyone a grade of 1 - give 0 if it is bad and 2 if it is good.

Positive skew: Tendency to rate people on the good end. An example is teachers who were asked to rate their students - 31% were rated as the best fifth, while only 5% were rated as the worst fifth! Avoid giving all grades 1 or 2, making the scale dichotomous and significantly less accurate.

Halo: Tendency to allow one's general assessment of the test subject to influence all the sub-questions. If a person makes a perfect bronchoscopy but forgets the 7th segment, he should only have the grade 1 of Right Lower Lobe. Evaluate one thing at a time without taking into account the overall impression.

In general the Assessment Form can be completed on an ongoing basis.

Below are the points of guidance for the individual grades:

Passage through vocal cords
This frequently causes problems for beginners.

Repeated, bumpy attempts are required	Grade 0
Required 2 attempts	Grade 1
Clean passage in the first attempt	Grade 2

Knowledge of the anatomy of the bronchial tree:
As the bronchoscopy progresses, please fill in a grade for each of the six fields.

Grade 0: If you feel that the participants do not know where they are. For example, if they confuse the right 6th segment and the middle lobe, 0 is given in the Middle Lobe and at most 1 in the Right Lower Lobe. If the person forgets to name a patch, 0 points can be given if you feel that this is partly or wholly due to doubt about the anatomy.

Grade 1*:* If you sense uncertainty in identifying a segment (e.g. if the person has to return to carina several times to orientate), 1 point is given. For example, if the person forgets segment 6 in the left lower lobe, 1 point is given in the Left Lower Lobe. If the person forgets to name a segment, 1 point can be given if you feel he / she is systematic and knows the anatomy, but designation is an oversight.

Grade 2: Provided all segments are safely and systematically reviewed and named correctly.

Collisions: The procedure should give an impression of how carefully the bronchoscopy has been performed. If this is unacceptable grade 0 is given, if it is perfect grade 2 is given.

Red-Out: With an inexperienced bronchoscopist there will often be longer periods when you can see nothing on the screen. This time in so-called Red-Out should be minimized (experienced people quickly pull back the scope, suck and try to clean the lens).
Grade 0 is given to an unacceptable amount of time in red-out and grade 2 is given to no (unnecessary) time in red-out. (Grade 1 is somewhere in between).

Centering
The bronchoscope should be centred throughout the study. If so, grade 2 is given whereas 0 is given if the scope often points away from the lumen. (Grade 1 is somewhere in between).

Good luck!

		0	1	2
Scope insertion	***Administration of LA***	Missing/inadequate administration of LA	Acceptable	Perfect administration of LA
	Passage through vocal cords	Needs several attempts to pass vocal cords	Acceptable	Perfect passage through vocal cords on first try
Right side	***Right Upper Lobe***	False identification	Uncertain but correct identification	Secure and correct identification
	Middle Lobe	False identification	Uncertain but correct identification	Secure and correct identification
	Right lower lobe	False identification	Uncertain but correct identification	Secure and correct identification
Left side	***Left upper lobe-apical***	False identification	Uncertain but correct identification	Secure and correct identification
	Lingula	False identification	Uncertain but correct identification	Secure and correct identification
	Left lower lobe	False identification	Uncertain but correct identification	Secure and correct identification
Scope movement	***Collisions***	Repeated scope collisions	Few Collisions	No unnecessary scope collisions
	Red-out	Unacceptable length of time in 'red-out'	Minimal time in 'red-out'	Unacceptable length of time in 'red-out'
	Centering	Frequent pointing away from lumen	Scope centered most of the time	Scope always centred

		0	1	2	3
Thompson Bronchitis Index[2]	***Erythema***	Normal	Light red	Red	Beefy red
	Oedema	Normal	Blunting of airway bifurcations	Loss of normal airway wall indentations	Airway occluded
	Secretions	Normal	Strands of clear mucus	Globs of mucus	Airway occluded
	Friability	Normal	Punctate submucosal haemorrhages with scope trauma	Linear submucosal haemorrhages with scope trauma	Frank bleeding with scope trauma

	0	1	2	3	4
Summary of procedure	Unacceptable	Poor	Acceptable	Good	Perfect

1. *Konge et al. Respiration 2012;83:53–60*
2. *Thompson et al. Chest. 1993 May;103(5):1482-8.*