## Appendix e3: Live endoscopy events (LEEs): ESGE recommendations

| Patient | **Informed consent.** An additional separate written informed consent must be signed for LEE participation. The presence of a third party is recommended. Patients must be informed that they may at any point refuse or withdraw their consent. Patients must not suffer any disadvantage for refusing or withdrawing their permission, and their endoscopic procedures must be performed outside the LEE without significant delay. |
| Patient advocate | **Patient care, dignity, and anonymity.** As an independent advocate for the patient, he/she must intervene and liaise with the director or staff of the LOC if, at any time, any of those patient interests are put at risk by lack of adherence to the ESGE recommendations for LEEs. The final decision by the director of the LOC must be respected by all parties, including the patient advocate. **Conflict of interest.** If the patient advocate perceives a possible personal or financial conflict of interest, for any of the parties involved, that might breach the ESGE recommendations, he/she must liaise with the director of the LOC. **Post-LEE feedback.** The patient advocate must give general feedback to the director of the LOC in a written proforma report; this must include all the potential or actual breaches of the ESGE recommendations, or any other action that may have exposed patients to an increased risk related to the LEE. |
| Operator | **Patient care.** The operator is the only person responsible for the endoscopic outcome of the procedure. Thus, the operator, together with the local doctors responsible for the patient’s care and, preferably with the independent patient advocate, should check each individual case that will be performed, including case history, planned procedures, and possible risk factors. The operators should also be introduced to the rest of the intervention team, including endoscopy nurses and anesthesiologists, and discuss the case with them. If the indication is deemed to be inappropriate, the LOC director should be immediately informed and the case cancelled. No procedure should be done only to demonstrate an endoscopic technique or device. Although the operator should focus primarily on the care of the patient, he/she should also, as needed and feasible, show the equipment used, accessory preparation, and other features that may improve the educational output of the case. The operator must also educate the host team as needed regarding any devices or procedures that require special knowledge. **Local staff support.** Visiting operators are unfamiliar with both the patient case and the endoscopic setting. Local staff must present visiting faculty members with relevant documentation on the patient case. This must be done well ahead of the scheduled procedure. **Availability of material and staff.** Visiting operators must state what material is required for performance of the pre-planned procedure. If the LOC director cannot provide the required material, the visiting operator must be allowed to bring their own material to the LEE center without any restriction from the LOC director or sponsoring companies. An exception may occur when specific material is not commercially available. In that situation, either the case or the operator must be changed accordingly. If the visiting operator feels that an accompanying nurse/technician may improve the procedure outcome, the operator must be allowed to bring the nurse/technician to the LEE, and insurance coverage should be extended accordingly. Necessary arrangements for familiarizing the expert with a new device should be made well in advance. **LEE procedure.** LEE operators are expected to carry out only procedures in which they have extensive experience. New techniques, adding a potential clinical benefit for the patient, may be included at an LEE only if the LOC staff has already been trained in them. **Post-procedure management.** Although the LOC director is responsible for the clinical management of the patient, the visiting operator should liaise with the LOC director as needed. Thus, the visiting operator should remain in contact with the local staff until the resolution of the case. |
| Moderator | **Patient care.** Although moderators are not directly included in patient care, they should never expose patients to risk. Thus, excessive prolongation of the procedure because of extended discussions must be avoided. It is desirable to have two moderators, one in the endoscopy room and one in the conference center, so that the operator is not distracted. Moderators or the audience may favor therapeutic strategies that are different from that of the LEE operator. In an extreme situation of different opinions, and if the best care of the patient is at risk, the independent advocate or the LOC director should be informed and should decide on the best interests of the patient. **Educational benefit.** Moderators must reinforce the educational message of LEE events. A description of the individual patient’s history and previous examinations, along with teaching points, should be delivered by the local staff before the start of each procedure. During the procedure, the moderators must interact to underline the educational and training points of the procedure. The moderators are also expected to interact with a multidisciplinary panel and the audience to provide further perspectives and clarification. |
LOC Director

Patient care. The clinical management of the patient is the responsibility of the LOC director, and possibly also of the anesthesiologist in charge of the patient, within the area of competence of each clinician. The LOC director—possibly with the support of the patient advocate—must interrupt the LEE procedure if he/she feels that the LEE is posing an additional risk to patient safety. In the case of endoscopy-related adverse events, the LOC director is responsible for managing such adverse events in liaison with the operator.

Definition of educational goals. This is done in liaison with the ESGE-LEE educational committee. Any liaison with industry on the definition of such goals is prohibited, to prevent influence on the selection of patients and procedures.

Selection of faculty members. Only experts with adequate skills and experience in endoscopic training should be included (see above).

Disclosure of conflict of interest. Local staff, visiting faculty members, and companies involved must disclose all their personal and financial conflicts of interests before the LEE. If any of these conflicts jeopardize patient safety, the person(s) or companies must be excluded from the LEE.

Availability of material for LEE procedures. The LOC director officially requests the visiting operators to provide the list of material needed to do pre-specified procedures during the LEE (see above), and requests such material from the corresponding manufacturers. If material is not available, the visiting operators must be informed, and appropriate consequent action must be taken.

Availability of additional staff for LEE procedures. The LOC director officially asks the visiting operators to specify what staff are needed to do pre-specified procedures in the LEE. Visiting operators may require additional medical assistants or nurses from their own centers to reduce the risks associated with the lack of familiarity with the LEE environment (see above).

Selection of procedures. These must relate to the educational goals. No procedure is permitted that does not provide an educational benefit. Only procedures that are considered ‘standard’ within the center should be performed. Techniques not routinely performed should be prohibited, because of possible risk before, during, or after the procedure.

Presence of medical personnel within the LEE endoscopy room. Only the health operators actually needed for patient care and educational purposes, including the patient advocate, should be allowed in the LEE room.

Post-procedure management. All LEE patients must be visited on the day of the LEE. In the case of adverse events, the LOC director is responsible for clinical management. He/she must also regularly inform the visiting faculty members about management of adverse events.

Post-LEE feedback. Data on 30-day morbidity and mortality for all patients treated within ESGE-organized or ESGE-endorsed LEEs must be documented in the ESGE registry. Any breach of the recommendations must also be communicated to ESGE to prevent future repetitions.

Industry relationships. Companies may be asked to provide the material and financial funding necessary to run the LEE, but must not interfere with its educational goals nor with the actual demonstration of the provided material.

Local staff

Patient care. When the LOC director is absent, a local endoscopist acts as the representative of the LOC director.

Patient selection. LEEs have been clearly associated with a higher rate of deep sedation and a longer procedure (Appendix 1). Moreover, an LEE does not represent the most suitable setting for high risk patients, since the educational purposes may distract the operator. Thus adequate sedation should be prepared and, as with all procedures, any risks should be anticipated.

Assistance to visiting faculty members. Visiting operators are unfamiliar with both the patient case and the endoscopic setting. Local staff must present the visiting faculty with all the documentation on the patient case, including clinical, biochemical, radiological, and other documentation when useful. This must be done at least 3 hours before the scheduled procedure. During LEEs, local staff must support the visiting operator providing medical and nonmedical assistance.

Case summary and educational goals. To maximize the educational benefit, the broadcast of each LEE case must be associated with a slide presentation of the case history. The last slide(s) must list the educational points of the LEE case.

LOC, local organizing committee