Supplementary file 2:

Diagnosis and treatment options

***For solid nodules:*** the following two strategies are proposed:

- Immediate surgical excision following pretreatment assessment in the absence of contraindications for diagnostic and possibly therapeutic purposes, especially when malignancy is highly probable. Subjects must be fully informed about the risk of "useless" excision of a benign nodule;
- Initially transthoracic needle biopsy and histology. Subjects must be fully informed about the risk of false-negative histology (invasive cancer with negative needle biopsy). Surgical excision of confirmed malignant nodules would then be the same as in the previous strategy.

The choice between these two options will be determined at a multidisciplinary meeting after informing the subject and after assessing the individual benefits and risks of each strategy.

In the case of positive pure ground-glass nodules, the diagnosis cannot be established by biopsy and the value of frozen-section examination to distinguish *in situ* adenocarcinoma from invasive adenocarcinoma has not been demonstrated. Surgical resection or close monitoring will be discussed on a case-by-case basis in a multi-disciplinary meeting. Indeterminate pure ground-glass nodules are associated with a high probability (greater than 75%) of *in situ* or minimally invasive adenocarcinoma (which cannot be distinguished on CT), which may justify surgical resection. However, as these tumours usually have a slow growth rate, annual follow-up CT for at least 5 years may be considered to be a suitable alternative.

***Surgery guidelines***

- Tumour ≥ 2 cm: the preferred techniques are lobectomy and complete mediastinal lymph node dissection;
- Tumour < 2 cm and solid nodule: standard surgery consists of lobectomy and complete mediastinal lymph node dissection, although anatomical segmentectomy with lymph node resection constitutes an alternative option;
- Tumour < 2 cm with pure ground-glass opacity: atypical resection is initially recommended. Subsequent surgical management will be determined by the results of final histological examination (invasive lepidic adenocarcinoma or in situ carcinoma).

The use of video-assisted thoracoscopic surgery is encouraged, as this treatment option is recommended in national surgical practice guidelines for the treatment of early-stage lung cancer.