Treatment of early stages (stages I and II)

Surgery

- Surgery should be offered to all patients with stage I and II NSCLC as the preferred treatment to all who are willing to accept procedure-related risks [III, A].
- For patients with a non-centrally located resectable tumour and absence of nodal metastasis on both CT and PET images, surgical resection is recommended [I, A].
- Anatomical resection is preferred over wedge resection [I, A].
- Anatomical segmentectomy is generally considered acceptable for pure GGO lesions or adenocarcinomas in situ or with minimal invasion [III, B].
- Lobectomy is still considered the standard surgical treatment of tumours ≥ 2 cm in size that have a solid appearance on CT [II, B].
- Lymph node dissection should conform to IASLC specifications for staging [III, A].
- Either open thoracotomy or VATS access can be carried out as appropriate to the expertise of the surgeon [III, A].
- VATS should be the approach of choice in stage I tumours [V, C].
- For patients with multifocal lung cancer, complete resection is recommended whenever possible. All patients with multifocal lung cancer should be discussed in a multidisciplinary tumour board [III, B].

Systemic therapy

- Adjuvant ChT should be offered to patients with resected stage II and III NSCLC [I, A] and can be considered in patients with resected stage IB disease and a primary tumour>4 cm [II, B]. Pre-existing comorbidity, time from surgery and postoperative recovery need to be taken into account in this decision taken in a multidisciplinary tumour board [V, A].
- For adjuvant ChT, a two-drug combination with cisplatin is preferable [I, A]. In randomised studies, the attempted cumulative cisplatin dose was up to 300 mg/m2, delivered in three to four cycles. The most frequently studied regimen is cisplatin–vinorelbine.
- At the present time, the choice of adjuvant therapy should not be guided by molecular analyses, e.g. ERCC1 mutation testing [IV, B].
- In the current state of knowledge, targeted agents should not be used in the adjuvant setting [II, A].
- In view of the equivalence of neoadjuvant and adjuvant ChT for OS, the consistent results and broad evidence base support adjuvant ChT as the timing of choice [II, C].
- (Neo)adjuvant anti-PD(L)-1 checkpoint inhibitors are currently being evaluated in addition to current standard of care.

Primary radiotherapy

- The non-surgical treatment of choice for stage I NSCLC is SABR. The dose should be to a biologically equivalent tumour dose of ≥ 100 Gy, prescribed to the encompassing isodose [III, A].
- SABR for early-stage peripheral lung tumours is associated with low toxicity in patients with COPD and the elderly [III, A].

- Salvage surgery, if feasible, may be offered to patients having complications post-SABR [V, B].
- Salvage surgery, if feasible, may be offered, using the same indications as for primary surgery in progressive disease after SABR, but surgery may be more difficult with higher operative risk [V, B].
- For medically inoperable patients with tumours with a size>5 cm and/or moderately central location, radical RT using more conventional or accelerated schedules is recommended [III, A].

Radiofrequency ablation

- Stage I NSCLC patients with strong contraindications for surgery and/or SABR may be treated with RFA [V, C].

Postoperative radiotherapy

- PORT in completely resected early-stage NSCLC is not recommended [I, A].
- In case of R1 resection (positive resection margin, chest wall), PORT should be considered [IV, B].
- Even if such patients were not included in RCTs, adjuvant ChT should be considered in patients with R1 resection of stage IB disease and a primary tumour >4 cm, stage II and III [V, A].
- In case both ChT and RT are administered post-surgery, RT should be administered after ChT [V, C].