Diagnostic and therapeutic challenges in thoracic malignancies: Early-stage NSCLC

Optimal assessment of an additional lung nodule in a patient with potential for cure
Christophe Dooms, BE

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clinical practice guidelines

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Early and locally advanced non-small-cell lung cancer (NSCLC): ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up†

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Establishing a diagnosis for an additional lung nodule

- **Increasing incidence**
  - CT imaging advances
  - often below PET detection limit
- **Diagnostic challenge**
  - definitely malignant *vs.* possibly malignant *vs.* probably benign
- **Staging challenge**
  - synchronous other tumour *vs.* sattelite *vs.* metastasis *vs.* multifocal lung cancer
- **Therapeutic challenge**
  - follow-up *vs.* invasive test *vs.* diagnostic resection

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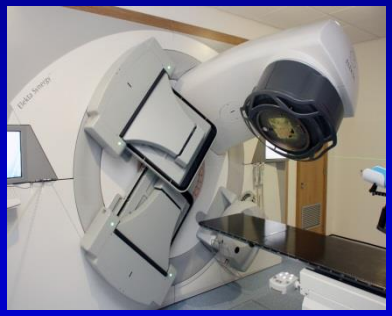
Minimally invasive surgery and stereotactic radiotherapy

Technically resectable stage I NSCLC



<u>Need for minimally invasive techniques</u>

- posterolateral thoracotomy
- muscle sparing thoracotomy
- video: VATS
- robot: RATS

<u>Need for better efficacy/toxicity ratio</u>

- high-dose
- altered fractionation
- SABR peripheral
- SABR central

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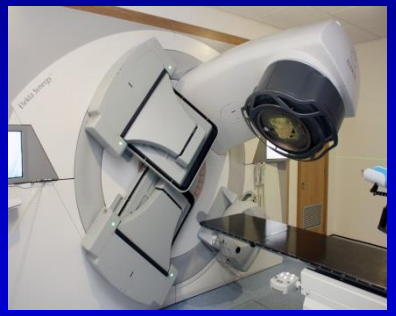
Table 2. Summary of recommendations

- **Surgery should be offered to patients with stage I or II NSCLC who are willing to accept procedure-related risks [III, A].**
- **Anatomical resection (lobectomy) is preferred over lesser resections such as wedge or segment resection [I, A].**
- **Either open thoracotomy or VATS access can be utilised as appropriate to the expertise of the surgeon [III, A].**
- **Lymph node dissection should conform to IASLC specifications for staging [III, A].**
- **The non-surgical treatment of choice for stage I NSCLC is stereotactic ablative radiotherapy (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 toxic effect in patients with COPD and the elderly [III, A].**
- **For tumours with a size >5 cm and/or central location, radical radiotherapy using more conventional daily or accelerated schedules is recommended [III, A].**

Minimally invasive surgery and stereotactic radiotherapy



Technically resectable stage I NSCLC

Functionally operable	Borderline operable	Non operable
Standard = lobectomy	Choice between sublobar resection vs. SABR	Standard = SABR
Investigational: lobectomy • vs. sublobar • vs. SABR	RCTs ongoing	central tumour?

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Adjuvant therapy for early stage NSCLC

clinical practice guidelines

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Table 2. Summary of recommendations

- **Adjuvant chemotherapy should be offered to patients with resected stage II or III NSCLC [I, A] and can be considered in patients with resected stage IB disease and a primary tumour >4 cm [II, B]. However, pre-existing co-morbidity and postoperative recovery need to be taken into account in this decision.**
- **For adjuvant chemotherapy, 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.**
- ***Given the current state of knowledge, the choice of adjuvant therapy should not be guided by molecular analyses such as ERCC1 or mutation testing [IV, B].***
- ***Given the current state of knowledge, targeted agents should not be used in the adjuvant setting [II, A].***
- **In view of the equivalence of neo-adjuvant and adjuvant chemotherapy for overall survival, the consistent results and broad evidence base support adjuvant chemotherapy as the timing of choice [I, A].**

Adjuvant therapy for early stage NSCLC

Modern thoracic surgery

- less invasive procedures
- ~15% pneumonectomy
- conform LN procedure

Adjuvant treatment

- additional treatment after radical local therapy to improve cure rate

Cytotoxic therapy

- cisplatin-based chemo
- PGX driven chemo

Cytostatic therapy

- TKIs
- angiogenesis blockers

Immunotherapy

- vaccines
- checkpoint inhibitors

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Thank you for your kind attention

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