

ARE WE READY TO FACE INDETERMINATE PULMONARY NODULES? A RETROSPECTIVE ANALYSIS OF CURRENT MANAGEMENT OF SUSPECTED LUNG CANCERS UNDERGOING SURGICAL RESECTION

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OBJECTIVE

Implementation of lung cancer screening programs will exponentially increase the number of indeterminate nodules detected. Multidisciplinary teams will have to propose well balanced diagnostic and therapeutic approaches. With this perspective, we pictured the current performance concerning the surgical resection of suspected lung cancers

In the sublobar resection group, chest drain duration was 2(IQR1-4) days, cardiopulmonary complication rate was 7.4%, length of hospital stay was 3(IQR2-5) days. In the major resection group Chest drain duration was 4(IQR3-6) days, cardiopulmonary complication rate was 12.7%, length of hospital stay was 6(IQR4-8) days.

METHODS

This is a retrospective analysis of patients operated on for suspected diagnosis of primary lung cancer in two tertiary centers. No histological diagnosis was available at the time of resection. Indication for metastasectomy was excluded. Patients characteristics, risk assessment, surgical performance and histological results were displayed with descriptive statistics.

Variable	Value
Age (years)	69 (62-73)
Male gender (n, %)	350 (56)
Smoking history (current/former) (n, %)	479 (77)
Body Mass Index	25 (22-29)
FEV1 (% of predicted)	89 (73-102)
Chronic kidney disease (n, %)	41 (7)
Diabetes (n, %)	26 (14)
Atrial fibrillation (n, %)	45 (7)
Coronary artery disease (n, %)	94 (15)
Previous cancer (n, %)	257 (41)
Performance status ≥ 2 (n, %)	35 (6)
Brock probability	35 (17-60)
Herder probability	74 (26-93)
Preop diagnostic attempt (n, %)	256 (41)
- Complications	24 (9)
Intraoperative frozen section (n, %)	325 (52)

RESULTS

We included 624 consecutive patients (2014-2022). We detected 494(79%) lung cancers and 97(15%) benign nodules.

Median Brock and Herder probability of lung cancer were 35%(IQR17-60) and 74%(IQR26-93) respectively.

256(41%) patients had at least a diagnostic attempt before surgery by mean of bronchoscopy or needle biopsy. Complication rate of these procedures was 9.7%. Intraoperative frozen section was performed in 325(52%) cases.

CONCLUSIONS

The use of surgical biopsy for indeterminate pulmonary nodules is extensive in our series. Even though major lung resections were almost entirely performed for malignancies, benign disease rate was high in sublobar resections. Resource investment and complication rate seem acceptable, but improvement of preoperative diagnostic strategies might reduce overwhelming surgical case load and overtreatment in screening perspective.

