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Pretreatment minimal staging for non-small cell lung cancer: an updated consensus report ☆

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In making its recommendations the Group set out a number of objectives.

(a) Any staging protocol should be simple and widely applicable, without being limited to the lowest common demoninator.
(b) The staging protocol should be sequential and logical, avoiding unnecessary tests which might prove expensive and invasive.
(c) The staging protocol proceeds to identify patients suitable for treatment with curative intent since there is no purpose to staging for palliative therapy.
(d) The staging protocol should be applicable to good clinical practice with all

☆ Pretreatment minimal staging for non-small cell lung cancers: a consensus report. Goldstraw P et al. Lung Cancer 1991; 7: 7–9.

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forms of therapy. There would be no restriction on institutional preference for additional investigations, nor additional requirements for trial purposes.

In making its recommendations the group made the following assumptions.

(a) Any staging protocol would be TNM based (UICC or AJC equivalent)
(b) The staging protocol covered only non-small cell lung cancer (NSCLC)
(c) No recommendations were made regarding which groups might be appropriate for different forms of therapy. This was deemed to be the domain of individual clinicians and their institutions.
(d) We assumed that the diagnosis already had been established.
(e) Patient suitability should be separately assessed, and we assumed that each patient was fit for all forms of therapy.

The staging protocol involves 3 steps, as outlined in the following tables.

Step I

Investigation		Patient group	Confirmatory tests
Clinical history (to include)	Weight loss and performance status	All patients	As appropriate
Clinical examination		All patients	As appropriate
Chest radiographs	PA Lateral	All patients	Aspiration of effusion (considered positive if cytology malignant)
Blood tests	Hb	All patients	As for high risk patients in Step II
	Alk Phos Transaminase LDH		

If still thought suitable for curative therapy proceed to Step II.

Step II

Investigation	Patient group	Confirmatory tests
Bronchoscopy	All patients with central tumours or those in whom central extension is suspected	The features of proximal, extrinsic compression are unreliable and require further evaluation of the mediastinum by CT and/or mediastinal exploration
Bone scan	High risk group[a]	Skeletal X-rays ± CT/MRI of bone if dubious positive result

CT chest and upper abdomen (to lower pole of kidneys, with i.v. contrast enhancement of mediastinal vessels)	All patients if available	Dubious findings confirmed (not necessarily histological)
Liver ultrasound	High risk group[a] if CT of abdomen not available	
Brain assessment by CT or MRI	Advisable in high risk group[a]	

- Unexplained anaemia (Hb < 11 G%)
- Unexplained weight loss (>8 lb (3 kg) in 6/12)
- Abnormal alk phosphatase, or transaminase
- Where any clinical suspicion of metastatic disease
- Patients with stage III disease

[a]High risk patients are those having non-specific features identified by Hooper et al. (1987) Am Rev Respr Dis 118: 279.

If still thought suitable for curative treatment proceed to Step III.

Step III

Investigation	Patient group
(a) Bronchoscopy if not previously undertaken	All patients
(b) Thoracoscopy or video assisted	If pleural effusion present, thoracoscopy cytology negative but clinical suspicion remains
(c) Mediastinal exploration • It is recommended that this is performed pre-operatively by	
• Transcarinal aspiration • Cervical mediastinoscopy	Patients in whom CT suggests mediastinal invasion or if CT shows nodes > 1.0 cms
• Additional evaluation of the subaortic fossa by left anterior mediastinotomy	The above groups with tumours of the left upper lobe and left main bronchus
• This must be performed intra-operatively • Palpation insufficient • Careful and extensive mediastinal dissection • Separate labeling as per Naruke or ATS of excised nodes for subsequent histological examination (only N1 nodes on resection specimen) • Re-evaluation of T stage	All patients — including those whose mediastinum has been assessed preoperatively

Proceed with definitive therapy, which will be surgical resection in all but the most unusual circumstances.

Postscript

The Group considered other tests which may be of value but made no recommendations as these tests are not universally available or acceptable and require validation.