

## REPORT PROFORMA LUNG BIOPSY/CYTOLOGY SPECIMENS

Version 1.0 – Authors Mayuri Basnet and Anne Marie Quinn for Manchester Lung Pathology Group incorporating RCPATH DATASET FOR LUNG CANCER HISTOPATHOLOGY REPORTS (5TH EDITION) Reporting proforma for lung cancer biopsy/cytology specimens

Previous treatment (neoadjuvant chemotherapy/radiotherapy)

Specimen origin:

Right lung, Left lung (Upper, Middle, Lower lobes ?), Bronchus?, Mediastinum, Pleura

Biopsy: Endobronchial, Transbronchial, Transthoracic needle biopsy, Lymph node, Pleura

Cytology: Transthoracic FNA lung, Bronchial washings/lavage, Bronchial brushings, Pleural fluid, Transbronchial or endoscopic needle aspirate (details of site), Other cytology

EBUS sample: list node station sampled or primary tumour for each station

\*It is recommended that residual positive cytology samples be processed to histology blocks for potential further analysis.

### Clinical details:

Primary reason for biopsy: initial diagnosis/ recurrence /molecular testing/

If recurrence: previous histology?

Likely primary lung tumour: yes/no

Likely clinical diagnosis: NSCC/SCC/lymphoma/mesothelioma/thymoma/other

Any other tumour elsewhere: yes/no/not known

Previous treatment (neoadjuvant chemotherapy/radiotherapy)

Primary clinician: (to whom report needs to be sent)

Secondary clinician (taking sample)

### Microscopic Description

Features of small cell carcinoma (crush artefact, nuclear moulding, salt & pepper chromatin): present/not present

Features of NSCC present: Cytoplasm, Prominent nucleoli

Neuroendocrine features: present/not present

Morphology of squamous cell carcinoma (keratinisation/intercellular bridges/dense cytoplasm/tadpole cells/pyknotic nuclei): present/not present

Morphology of adenocarcinoma (acinar formation/lepidic pattern/mucinous/signet ring cells/foamy vacuolated cytoplasm/ eccentric nuclei): present/not present

EBUS sample – presence of lymph node sampling for each node – yes/no

Immunohistochemistry: performed/not performed

TTF-1: positive/negative

P63/P40: positive/negative

CK5/6: positive/negative

Others: positive/negative

Tumour content: Material available for molecular testing: yes/no

If no, give reasons:

Initial material scanty

Material insufficient after immunohistochemistry

Other

If yes, consider stating best block with an estimate of neoplastic cell content

List any molecular tests requested (EGFR, ALK, ROS1) stating block selected

**Final diagnosis** (*adapted from RCPATH dataset 4<sup>th</sup> edition*)

Adenocarcinoma (Morphologic adenocarcinoma patterns clearly present)

Specify patterns present

Non-small cell carcinoma, favour adenocarcinoma

(Morphologic adenocarcinoma patterns not present but adenocarcinomatous differentiation supported by stains (e.g. TTF-1, DPAS))

Squamous cell carcinoma (Morphologic squamous cell patterns clearly present)

Non-small cell carcinoma, favour squamous cell carcinoma

(Morphologic squamous cell patterns not present but squamous differentiation supported by stains, e.g. p63, CK5/6)

Small cell carcinoma

Non-small cell carcinoma, not otherwise specified (NSCC-NOS)

Non-small cell carcinoma with neuroendocrine morphology (NE markers positive)

Non-small cell carcinoma with neuroendocrine morphology (NE markers negative)

Non-small cell carcinoma, NOS, possible adenosquamous carcinoma (when both glandular and squamous components are morphologically present or both suggested by special stains)

NSCC with spindle and/or giant cell carcinoma and/or pleomorphic features (mention if adenocarcinoma or squamous carcinoma are present morphologically or with stains)

Combined tumour, please list

Other tumour, please list

**Interpreting immunochemistry:**

TTF-1/Napsin positive; p40/CK5/6 negative- adenocarcinoma of lung origin

TTF-1/Napsin negative; p40/CK5/6 positive- squamous cell carcinoma

TTF-1/Napsin positive; p40/CK5/6 positive – adenocarcinoma (see below)

TTF-1/Napsin positive; p40/CK5/6 positive for morphologically different cells – may represent adenosquamous carcinoma (NSCC-NOS, possible adenosquamous). *However please note that p40 will stain basal bronchial epithelium and careful interpretation of tumour cell positivity is required.*

TTF-1/Napsin negative; p40/CK5/6 negative- NSCC-NOS (if confirmed lung primary)

TTF-1 positive/Napsin negative - is there neuroendocrine differentiation?, consider the possibility of metastatic disease from thyroid