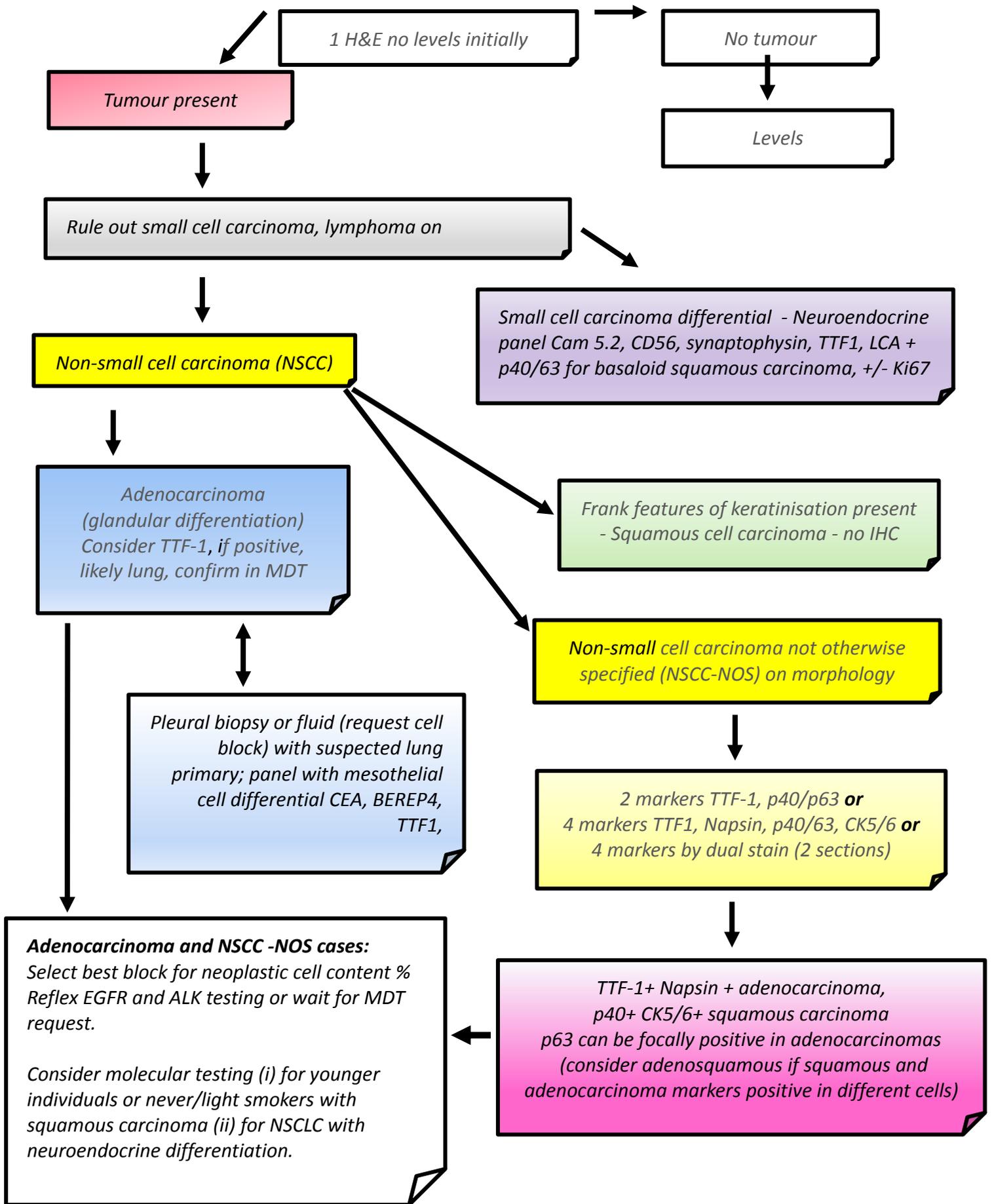


Guideline on management of lung tumour biopsy/cytology cell block samples for Greater Manchester
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TTF-1, Napsin, CK5/6, p40/ p63 negative

- *Consider primary from elsewhere*, Check previous histology, correspondence, radiology;*
- *Weigh the balance between waiting for MDT discussion (conserve tissue) and delays in turnaround times*
- *Consider a smaller panel initially: CK7 & CK20, or combine with markers listed below*
- *CK7 & CK20 negative; confirm carcinoma (see below) consider prostate/renal primary;*
- *CK7 positive consider GATA-3(Breast), PAX-8 (female genital tract), SPT24 TTF1, if available (lung), CDX2 (upper GI, pancreatobiliary tree); also consider mesothelioma as a differential*
- *CK20 positive, consider CDX2*

If CK7/CK20 negative consider broad-spectrum cytokeratin AE1/AE3, MNF116, consider other pathology e.g. mesothelioma (calretenin); melanoma (S100); lymphoma (CD45)

NSSC-NOS
CK7 expression can be seen in tumours arising in the lung however CK7+CK20-profile is nonspecific and also associated with breast, upper gastrointestinal tract and hepatobiliary carcinomas
Molecular testing if satisfied lung primary

Molecular testing - strategies to conserve tissue

1. Estimate neoplastic cell content (% neoplastic cells relative to non-neoplastic cells in a section)
2. If tumour cells can be selected on a section and a higher concentration of tumour is required, a H&E stains that accompanies unstained sections for mutation testing can be marked to highlight concentrated neoplastic cell areas along with an estimate of neoplastic cell content in the marked area
3. Select tumour areas with fewer inflammatory cells which dilute neoplastic cell content
4. If more than one block contains tumour, conserve the block with the highest neoplastic cell content for molecular testing where possible
5. Consider splitting samples with multiple cores into 2 blocks
6. If molecular testing fails, consider requesting on another block

EGFR mutation testing and ALK FISH (on IC+ cases) are conducted at the Manchester Centre for Genomic Medicine, St. Mary's Hospital Manchester. ALK immunohistochemistry is conducted in several pathology departments within the region – sections are cut after those required for EGFR testing.