A guide to
Adrenal Gland Tumours Histopathology Reporting

### Clinical details

**S1.02** Clinical information provided on request form
- Text OR Structured entry as below:

  - Functionality of the adrenal gland
    - Functional
    - Non-functional
  - If functional, specific type of presentation
    - Text

  - Operative procedure
    - Text
  - Any previous adrenal surgery
    - Text
  - Site of lesion(s)
    - Text
  - Laterality of lesion
    - Left
    - Right
    - Both
  - Any accompanying specimens
    - Lymph nodes
    - Kidney
    - Other
  - If other, provide details
  

**S1.03** Pathology accession number
- Text

**S1.04** Principal clinician
- Text

**S1.05** Surgeon’s identity and contact details
- Text

**G1.01** Other clinical info. received
- Text

### Macroscopic findings

**S2.02** Specimen labelled as
- Text

**S2.01** Specimen dimensions
- Cannot be recorded OR

  - __x__x__mm

**S2.03** Specimen weight
- ___g

**S2.04** Tumour capsule
- Intact
  - Not intact

**S2.05** Number of macroscopically visible tumour(s)
- __

**S2.06** Macro. appearance of lesion(s)
- (Complete for each lesion...)
  - Location
    - Indeterminate
    - Cortex
    - Medulla
    - Other
  - Text

**S2.07** APPEARANCE OF UNINVOLVED ADRENAL GLAND

  - Cortex
    - Unremarkable
    - Atrophic (thin)
    - Hypertrophic
    - Not identified

  - Medulla
    - Unremarkable
    - Atrophic (thin)
    - Hypertrophic
    - Not identified

**G2.02** ANY ACCOMPANYING SPECIMENS

  - Lymph nodes
    - Absent
    - Present
  - Other adjacent structures
    - Text

**G2.03** Other macroscopic comment
- Text

### Microscopic findings

**S3.01** Tumour type
- See p2

**G3.01** Tumour type variant
- See p2

**S3.02** Diameter of largest tumour
- ___mm

**S3.13** Cellular pattern (diffuse architecture is defined as large nests or diffuse growth >10%)
- Non-diffuse
  - Zellballen
  - Large & irregular cell nests
  - Pseudorosette

**S3.14** Cellularity
- Low
  - Moderate
  - High

**S3.10** Central or confluent necrosis
- Absent
  - Present

**S3.03** Adrenal vein or vena cava invasion
- Absent
  - Present

**S3.04** Capsular invasion
- Absent
  - Present

**S3.06** Extension into adipose tissue
- Absent
  - Present

**S3.07** Adjacent organs
- Not involved
  - Involved

**S1.06** New primary or recurrence
- New primary
  - Local recurr.
  - Dist. met.

**S1.08** If distant metastasis, provide details
- Text

**S1.09** Clinical stage
- Text

**S1.10** Involvement of adjacent organs
- Not involved
  - Involved

**S1.11** If involved, describe involved organs
- Text

**S1.12** Clinical or differential diagnosis
- Text

**G1.02** Other clinical info. received
- Text
Microscopic findings (cont.)

<table>
<thead>
<tr>
<th>S3.14</th>
<th>Cellular monotony</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Present</td>
</tr>
<tr>
<td></td>
<td>Tumour cell spindling</td>
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<tr>
<td></td>
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<td>Present</td>
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<tr>
<td></td>
<td>Profound nuclear pleomorphism</td>
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<tr>
<td></td>
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<td>Present</td>
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<tr>
<td></td>
<td>Nuclear hyperchromasia</td>
<td>Absent</td>
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<tr>
<td></td>
<td></td>
<td>Present</td>
</tr>
<tr>
<td>S3.08</td>
<td>Mitotic rate</td>
<td>_____ /10HPF</td>
</tr>
<tr>
<td>S3.09</td>
<td>Atypical mitotic figures</td>
<td>Absent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Present</td>
</tr>
</tbody>
</table>

FOR ADRENOCORTICAL TUMOURS

<table>
<thead>
<tr>
<th>S3.11</th>
<th>Nuclear grade (Fuhrman)</th>
<th>grade 1</th>
<th>grade 2</th>
<th>grade 3</th>
<th>grade 4</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>S3.12</td>
<td>Tumour comprising clear or vacuolated cells</td>
<td>_____%</td>
<td></td>
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<tr>
<td>S3.08</td>
<td>Mitotic rate</td>
<td>_____ /50HPF</td>
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<tr>
<td>S3.09</td>
<td>Atypical mitotic figures</td>
<td>Absent</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Present</td>
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</tr>
<tr>
<td>S3.13</td>
<td>Cellular pattern (diffuse growth is defined as &gt;1/3 of tumour forms patternless sheets of cells; trabecular, cord, columnar, alveolar or nesting is not considered diffuse)</td>
<td>Non-diffuse</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Diffuse archit.</td>
<td></td>
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<tr>
<td>S3.10</td>
<td>Central or confluent necrosis</td>
<td>Absent</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Present</td>
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<tr>
<td>S3.03</td>
<td>Adrenal vein or vena cava invasion</td>
<td>Absent</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Present</td>
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<tr>
<td>S3.04</td>
<td>Capsular invasion</td>
<td>Absent</td>
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<td></td>
<td></td>
<td>Present</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>S3.07</td>
<td>Adjacent organs</td>
<td>Not involved</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Involved</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>If involved, list involved organs</td>
<td>Text</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>S3.05</td>
<td>Sinusoidal invasion (only if conventional or oncocytic adrenocortical neoplasm)</td>
<td>Absent</td>
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<tr>
<td></td>
<td></td>
<td>Present</td>
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</table>

FOR ALL TUMOURS

<table>
<thead>
<tr>
<th>G3.02</th>
<th>MALIGNANT POTENTIAL</th>
<th>Scoring system (eg PASS, Weiss)</th>
<th>Text</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Score for malignant potential</td>
<td>Numeric</td>
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<tr>
<td>S3.15</td>
<td>Non-tumour adrenal gland</td>
<td>See p2</td>
<td></td>
</tr>
<tr>
<td>S3.16</td>
<td>Margin status</td>
<td>Clear</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Involved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If clear, record distance to closest margin</td>
<td>_____mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If involved, record involved margin(s)</td>
<td>Text</td>
<td></td>
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<tr>
<td>S3.17</td>
<td>Lymph node status</td>
<td>Clear</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Involved</td>
<td></td>
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<tr>
<td></td>
<td>If involved, record no. of positive nodes out of total no. of nodes</td>
<td>_____ / _____</td>
<td></td>
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<tr>
<td>G3.03</td>
<td>Coexistent pathological abnormalities</td>
<td>Absent</td>
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<td></td>
<td></td>
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<tr>
<td>G3.04</td>
<td>Other relevant micro. comments</td>
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Ancillary test findings

<table>
<thead>
<tr>
<th>S4.01</th>
<th>Ancillary Tests</th>
<th>Not performed</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Perfomed</td>
</tr>
</tbody>
</table>

If performed, complete the following for each test performed:

- Test result type eg FISH, IHC, cytogenetics etc
- Text
- Result
- Text
- Conclusion
- Text
- Laboratory performing the test
- Text
- Method
- Text
- Substrate (eg cytology smears, fluid in special media, paraffin block, fresh tissue, etc)
- Text
- Person responsible for reporting
- Text

Synthesis and overview

<table>
<thead>
<tr>
<th>S5.01</th>
<th>Pathological tumour stage &amp; stage grouping (AJCC) (Required only for adrenal cortical cancer)</th>
<th>See p3</th>
</tr>
</thead>
<tbody>
<tr>
<td>S5.02</td>
<td>Year of publication &amp; edition of cancer staging system</td>
<td>Text</td>
</tr>
<tr>
<td>G5.01</td>
<td>Diagnostic summary. Include: specimen type, tumour type, diameter of largest tumour, tumour stage, completeness of excision</td>
<td>Text</td>
</tr>
<tr>
<td>S5.03</td>
<td>Overarching comments</td>
<td>Text</td>
</tr>
</tbody>
</table>

S3.15 Non-tumour adrenal gland

- Unremarkable
- Not identified/not assessable
- Multi select value list (select all that apply)
  - Adrenal cortical atrophy
  - Hyperplasia
  - Cortical nodules
  - Medullary hyperplasia/nodule

S3.01 Tumour type /G3.01 Variant

Adrenal cortical tumours
- Adrenal cortical carcinoma
- Adrenal cortical adenoma

Adrenal medullary tumours
- Malignant phaeochromocytoma
- Benign phaeochromocytoma
- Composite phaeochromocytoma/paraganglioma

Extra-adrenal paraganglioma
- Carotid body
- Jugulotympanic
- Vagal
- Laryngeal
- Aortico-pulmonary
- Ganglioneuroma
- Gangliocytic
- Cauda equina
- Schwannoma
- Myelolipoma
- Ganglionocytoma
- Orbital Nasopharyngeal
- Angiosarcoma

Secondary tumours
- Sex-cord stromal tumour
- Soft tissue and germ cell tumours
- Myelolipoma
- Teratoma
- Schwannoma
- Gang protocol
- Angiosarcoma

Extra-adrenal paraganglioma
- Carotid body
- Jugulotympanic
- Vagal
- Laryngeal
- Aortico-pulmonary
- Ganglioneuroma
- Gangliocytic
- Cauda equina
- Schwannoma
- Myelolipoma
- Ganglionocytoma
- Orbital Nasopharyngeal
- Angiosarcoma

Other adrenal tumours
- Adenomatoid tumour
- Sex-cord stromal tumour
- Soft tissue and germ cell tumours
- Myelolipoma
- Teratoma
- Schwannoma
- Ganglionocytoma
- Angiosarcoma

V1.0 Guide derived from Adrenal Gland Tumours Structured Reporting Protocol 1st Edition
S5.01 Tumour stage (AJCC)##

**Primary Tumour (T)**

TX  Primary tumour cannot be assessed
T0  No evidence of primary tumour
T1  Tumour 5 cm or less in greatest dimension, no extra-adrenal invasion
T2  Tumour greater than 5 cm, no extra-adrenal invasion
T3  Tumour of any size with local invasion, but not invading adjacent organs*
T4  Tumour of any size with invasion of adjacent organs*

*Adjacent organs include kidney, diaphragm, great vessels, pancreas, spleen, and liver.

**Regional Lymph Nodes (N)**

NX  Regional lymph nodes cannot be assessed
N0  No regional lymph node metastasis
N1  Metastasis in regional lymph node(s)

**Distant Metastasis (M)**

M0  No distant metastasis
M1  Distant metastasis

**Stage Grouping**

<table>
<thead>
<tr>
<th>Stage</th>
<th>T</th>
<th>N</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>T1</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td>II</td>
<td>T2</td>
<td>N0</td>
<td>M0</td>
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<tr>
<td>III</td>
<td>T3</td>
<td>N1</td>
<td>M0</td>
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<td>T2</td>
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<td>T4</td>
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<tr>
<td>Any T</td>
<td>Any N</td>
<td>Any M</td>
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</tbody>
</table>

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