

# A guide to Parathyroid & Atypical Neoplasms Histopathology Reporting



Includes the  International Collaboration on Cancer reporting dataset denoted by \*

Clinical details		Microscopic findings		
<a href="#">S1.02</a>	<b>Clinical info. on request form</b> (complete as narrative or use the structured format below)	Text OR Information not provided*	<a href="#">S3.01</a> * <b>Histological tumour type</b> See p2	
	* <b>Hyperparathyroidism</b>	Primary Secondary Tertiary Non-functional	<a href="#">S3.02</a> * <b>Histological tumour grade</b> See p2	
	* <b>Previous parathyroid surgery</b>	Text	<a href="#">S3.03</a> * <b>Extent of invasion</b> See p2	
	* <b>Relevant familial history</b>	Text	<a href="#">S3.04</a> * <b>Lymphovascular invasion</b> Not identified OR Select all that apply Present (vascular invasion, lymphatic invasion)	
	* <b>Presence of a clinical syndrome</b>	Text	<a href="#">S3.05</a> * <b>Perineural invasion</b> Not identified Present	
<a href="#">G1.01</a>	Copy to doctor	Text	<a href="#">S3.06</a> * <b>Necrosis</b> Not identified Present	
<a href="#">S1.03</a>	<b>Pathology accession number</b>	Text	<a href="#">S3.07</a> * <b>Mitotic count</b> ___ mitotic figures/2 mm <sup>2</sup> ** **Note: 2 mm <sup>2</sup> approximates 10 high power fields on some microscopes.	
<a href="#">S1.04</a>	<b>Principal clinician</b>	Text	<a href="#">S3.08</a> <b>Margin status</b> Not involved (R0), specify distance to closest margin Involved (abutting tissue edge [R1 resection]; Transected, fragmented or ruptured [possible R2 resection]) Cannot be assessed, <i>specify</i>  <i>Distance to closest margin</i> ___ mm	
<a href="#">G1.02</a>	Other clinical information received	Text	<b>Location of involved margin</b> Text	
Macroscopic findings			<a href="#">S3.09</a> <b>Lymph node status</b> No nodes submitted or found Not involved Involved	
<a href="#">S2.01</a>	<b>Specimen labelled as</b>	Text	<b>Number of lymph nodes examined</b> ___ OR Number can't be determined	
<a href="#">S2.02</a>	* <b>Clinical information</b>	Text	<b>Number of positive lymph nodes</b> ___	
<a href="#">S2.03</a>	* <b>Pre-operative biochemical information</b>	Information not provided* OR	<a href="#">G3.01</a> Coexistent findings See p2	
	* <b>Calcium</b>	Text	<a href="#">S3.10</a> <b>Distant metastases</b> Not identified Info not available Present, <i>specify site(s)</i>	
	* <b>Parathyroid hormone</b>	Text	<a href="#">G3.02</a> Additional microscopic comment Text	
	* <b>Other</b>	Text	Ancillary findings	
<a href="#">S2.04</a>	* <b>Operative procedure</b>	See p2	<a href="#">G4.01</a> * <b>Ancillary studies</b> See p2	
<a href="#">G2.01</a>	* <b>Intra-operative findings</b>	See p2	Synthesis and overview	
<a href="#">S2.05</a>	* <b>Specimen(s) submitted</b>	See p2	<a href="#">S5.01</a> * <b>PATHOLOGICAL STAGING</b> See p3	
<a href="#">S2.06</a>	* <b>Tumour site(s)</b>	See p2	<a href="#">S5.02</a> <b>Year and edition of staging system</b> Text	
<a href="#">S2.07</a>	* <b>Specimen weight</b>	Can't be assess'd, <i>specify</i> OR ___ mg Parathyroid alone OR ___ mg Parathyroid with other structure(s), <i>specify structure(s)</i>	<a href="#">G5.01</a> Diagnostic summary Text Include: Specimen submitted; Histological tumour type; Diameter of largest tumour; Completeness of excision; Tumour stage.	
<a href="#">S2.08</a>	* <b>Tumour dimensions</b>	<b>Maximum tumour dimension (largest tumour)</b> ___ mm  Additional dimensions (largest tumour) ___ x ___ x ___ mm	<a href="#">S5.03</a> <b>Overarching comment</b> Text	
<a href="#">S2.09</a>	<b>Block identification key</b>	Text	<a href="#">G5.02</a> Edition/version of RCPA protocol Text	
<a href="#">G2.02</a>	Other macroscopic comment	Text		

\*Note: A diagnosis of parathyroid carcinoma or atypical parathyroid neoplasm requires information regarding intra-operative findings, serum PTH and calcium levels, comorbidities such as chronic renal failure etc. Thus, this option should only be used after all efforts to obtain this information, including MDT discussion, have been exhausted.

## S2.02 Operative procedure

Not specified

OR (*Select all that apply*)

Side

- Right
- Left
- Not specified

Location

- Superior
- Inferior
- Not specified

Tissue nature

- Parathyroidectomy, single gland
- Parathyroidectomy, en block with thyroid lobe
- Other parathyroid gland(s) sampling
  - Unilateral
  - Bilateral
- Lymph node sampling, *specify*
- Soft tissue of neck, *specify*
- Other, *specify*
- .

## G2.01 Intra-operative findings

Not specified

OR (*Select all that apply*)

- Non-adherent to surrounding structures
- Adherent to structure(s)
  - Thyroid
  - Recurrent laryngeal nerve
  - Oesophagus
  - Skeletal muscle
  - Other, *specify*
- Other, *specify*

## S2.05 Specimen(s) submitted

Not specified\*

OR (*Select all that apply*)

- Parathyroid
  - Left
    - Superior
    - Inferior
    - Not specified
  - Right
    - Superior
    - Inferior
    - Not specified
  - Other, *specify*
- Thyroid gland
  - Left
  - Right
  - Isthmus
- Lymph nodes, *specify site(s) and laterality*
- Other, *specify site(s) and laterality*

## S2.06 Specimen site(s)

Not specified\*

OR (*Select all that apply*)

- Parathyroid
  - Left
    - Superior
    - Inferior
    - Not specified
  - Right
    - Superior
    - Inferior
    - Not specified
  - Mediastinal
  - Intrathyroidal, *specify lobe*
- Soft tissue or muscle, *specify site(s) and laterality*
- Lymph nodes, *specify site(s) and laterality*
- Other, *specify site(s) and laterality*

## S3.01 Histological tumour type

- Atypical parathyroid neoplasm (atypical parathyroid adenoma)/neoplasm of uncertain malignant potential (UMP)\*
- Parathyroid carcinoma

\*Note: Defined as tumours that are histologically or clinically worrisome but do not fulfil the more robust criteria (i.e. invasion, metastasis) for carcinoma. They generally include tumours that have two or more concerning features, such as fibrous bands, mitotic figures necrosis, trabecular growth, or adherence to surrounding tissues intraoperatively. Atypical parathyroid neoplasms usually have a smaller dimension, weight, and volume than carcinomas and are less likely to have coagulative tumour necrosis.

## S3.01 Histological tumour type

- Low grade
- High grade
- Not determined
- Not applicable (i.e. atypical neoplasm/adenoma, UMP\*)

\*Note: Defined as tumours that are histologically or clinically worrisome but do not fulfil the more robust criteria (i.e. invasion, metastasis) for carcinoma. They generally include tumours that have two or more concerning features, such as fibrous bands, mitotic figures necrosis, trabecular growth, or adherence to surrounding tissues intraoperatively. Atypical parathyroid neoplasms usually have a smaller dimension, weight, and volume than carcinomas and are less likely to have coagulative tumour necrosis.

## S3.03 Extent of invasion

- Cannot be assessed, *specify*
- Confined to parathyroid without invasion through tumour capsule

OR

Select all that apply:

- Invasion through tumour capsule
- Invasion into extra-parathyroid soft tissue
- Invasion into adjacent structures, *specify*
  - Thyroid
  - Recurrent laryngeal nerve
  - Oesophagus
  - Skeletal muscle
  - Other, *specify*

## G3.01 Coexistent findings

Select all that apply:

- None identified
- Present
  - Other finding(s) in same parathyroid gland as neoplasm
  - Other, *specify*
- Tissue from another submitted parathyroid gland, *specify*
  - Normal
  - Hypercellular, *specify*
  - Other, *specify*

## G4.01 Ancillary studies

Not performed

OR

Select all that apply:

- Immunohistochemistry performed
  - Ki-67, *specify results and method* \_\_%
  - Parafibromin (CDC73), *specify results*
  - PGP9.5, *specify results*
  - Other immunohistochemistry, *specify*
- Molecular testing performed
  - CDC73 (parafibromin gene)
    - Germline testing, *specify results*
    - Tumour (somatic) testing, *specify results*
  - Other molecular test(s), *specify*
- Other, *specify*

## S5.01 Stage & stage group##

### Suffixes

m - multiple primary tumours; y - post therapy; r - recurrent

### Primary Tumour (T)

- TX Primary tumour cannot be assessed
- T0 No evidence of primary tumour
- Tis Atypical parathyroid neoplasm (neoplasm of uncertain malignant potential)\*
- T1 Localised to the parathyroid gland with extension limited to soft tissue
- T2 Direct invasion into the thyroid gland
- T3 Direct invasion into recurrent laryngeal nerve, oesophagus, trachea, skeletal muscle, adjacent lymph nodes, or thymus
- T4 Direct invasion into major blood vessel or spine

\*Note: Defined as tumours that are histologically or clinically worrisome but do not fulfill the more robust criteria (i.e. invasion, metastasis) for carcinoma. They generally include tumours that have two or more concerning features, such as fibrous bands, mitotic figures, necrosis, trabecular growth, or adherence to surrounding tissues intraoperatively. Atypical parathyroid neoplasms usually have a smaller dimension, weight, and volume than carcinomas and are less likely to have coagulative tumour necrosis.

### Regional lymph node (N)

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Regional lymph node metastasis
- N1a Metastasis to level VI (pretracheal, paratracheal, and prelaryngeal/Delphian lymph nodes) or superior mediastinal lymph nodes (level VII)
- N1b Metastasis to unilateral, bilateral, or contralateral cervical (level I, II, III, IV, or V) or retropharyngeal nodes

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