

A guide to Pheochromocytoma and Paraganglioma Histopathology Reporting



Includes the  International Collaboration on Cancer reporting dataset denoted by *

Clinical details		Macroscopic findings cont.	
S1.02	Clinical info. on request form (complete as narrative or use the structured format below)	Text OR Information not provided*	S2.09 * Tumour dimensions Note: Repeat tumour identification and dimension for each tumour identified
	* Hormone status	Biochemically functioning	Can't be assess'd, <i>specify</i> OR Text AND __ mm maximum dimension (largest tumour)
	* Imaging findings	Text	* Additional dimensions (largest tumour)
	* Relevant biopsy/ cytology results	Text	__ mm x __ mm
	* Previous therapy (including pre-operative embolization, chemotherapy, radiotherapy, targeted therapy, immunotherapy)	Text	S2.10 * Appearance of uninvolved adrenal gland
	* Relevant familial history	Text	Not applicable OR
	* Presence of endocrine or other tumours	Text	* Medullary nodules (microphaeochromocytoma) (<10 mm)
	* Germline mutation or familial syndrome	Text	Present Absent Indeterminate Can't be assess'd, <i>specify</i>
G1.01	Copy to doctor	Text	* Diffuse hyperplasia
S1.03	Pathology accession number	Text	Present Absent Indeterminate Can't be assess'd, <i>specify</i>
S1.04	Principal clinician	Text	S2.11 * Specimen integrity
G1.02	Other clinical information received	Text	Not applicable Specimen intact Fragmented specimen Can't be assess'd, <i>specify</i>
Macroscopic findings			S2.12 Block identification key
S2.01	Specimen labelled as	Text	Text
S2.02	* Clinical information	Text	G2.02 Other macro. comment
S2.03	* Operative procedure	See p2	Text
S2.04	* Specimen(s) submitted	See p2	
S2.05	Specimen weight	__ g	
G2.01	Specimen dimensions	__ x __ x __ mm	
S2.06	* Tumour focality	Indeterminate Can't be assess'd, <i>specify</i> Unifocal Multiple	
	* Number of tumours in same organ	__	
	* Number of tumours in separate organs	__	
S2.07	* Tumour site	See p2	
S2.08	* Macroscopic appearance of lesion(s)	Repeat for each primary tumour	
	Location	Medulla Indeterminate Other	
	Details	Text	
	Borders	Encapsulated Infiltrative	
	Description	Text	
	Distance to nearest excision margin	__ mm	
			Microscopic findings
			S3.01 * Histological tumour type
			See p2
			G3.01 * Adverse features
			See p2
			S3.02 * Extent of invasion
			See p2
			S3.03 Extension into adipose tissue (for phaeochromocytoma)
			Absent Present <i>Distance</i> __ mm
			S3.04 * Lymphovascular invasion
			See p2
			S3.05 * Mitotic count
			__ mitotic figures/2 mm ² ** **Note: 2 mm ² approximates 10 high power fields on some microscopes. Can't be assessed, <i>specify</i> AND/OR
			Atypical mitoses
			Can't be assess'd Absent Present
			Ki-67 proliferation index
			__ % OR Can't be assess'd, <i>specify</i>
			S3.06 Non-tumour appearance
			Unremarkable OR Not identified/not assessable OR Adrenal cortical atrophy Hyperplasia Cortical nodules Medullary hyperplasia/nodule

Microscopic findings cont.		Synthesis and overview	
G3.02	Malignant potential	Text	S5.01 *PATHOLOGICAL STAGING See p3
	Scoring system (e.g. PASS, Weiss etc.)		S5.02 Year and edition of staging system Text
	Score for malignant potential	—	G5.01 Diagnostic summary Text
S3.07	*Margin status	Not involved (R0), specify distance to closest margin Involved, specify R1 (microscopic) or R2 (macroscopic) extent and location of involvement if possible Cannot be assessed, specify	Include: Specimen submitted; Histological tumour type; Diameter of largest tumour; Completeness of excision; Tumour stage.
	*Distance to closest margin	— mm	S5.03 Overarching comment Text
	*Closest margin	Text	G5.02 Edition/version of RCPA protocol Text
	*Extent of margin involvement	— mm R1 (microscopic), specify if possible — mm R2 (macroscopic), specify if possible	S2.03 Operative procedure
	Location of involved margin	Text	Not specified
S3.08	*Lymph node status	No nodes submitted or found OR	OR (Select all that apply)
	Lymph node biopsy site(s)	Text	<ul style="list-style-type: none"> • Biopsy (core needle, incisional, excisional), specify • Open resection, specify procedure, including other organs if present (e.g. adrenal resection and liver biopsy) • Laproscopic • Organ-sparing • Other (e.g. conversion, laproscopic, open), specify
		Not involved Involved	S2.04 Specimen(s) submitted
	Number of lymph nodes examined	—	Not specified*
	Number of positive lymph nodes	—	OR (Select all that apply)
	*Extranodal extension (ENE)	Not identified Present Cannot be determined	<ul style="list-style-type: none"> • Adrenal tumour <ul style="list-style-type: none"> o Left o Right • Biopsy tissue, specify site(s) and laterality • Lymph nodes, specify biopsy/dissection, site(s) and laterality • Other (e.g. right neck mass, midline abdominal mass), specify site(s) and laterality
	*Number of nodes with ENE	—	S2.07 Tumour site
	Maximum dimension of largest lymph node metastasis	— mm	Not specified
S3.09	*Distant metastases	Not identified Not assessed Present, specify site(s)	OR (Select all that apply)
G3.03	Coexistent abnormalities	Absent Present, specify	<ul style="list-style-type: none"> • Adrenal tumour <ul style="list-style-type: none"> o Left o Right • Other abdominal or pelvic <ul style="list-style-type: none"> o Paraaortic o Urinary bladder o Other, specify • Head and neck <ul style="list-style-type: none"> o Carotid body <ul style="list-style-type: none"> • Left • Right o Middle ear (jugulotympanic) <ul style="list-style-type: none"> • Left • Right o Vagal <ul style="list-style-type: none"> • Left • Right o Laryngeal <ul style="list-style-type: none"> • Left • Right o Other, specify site(s) and laterality
G3.04	Additional microscopic comment	Text	S3.01 Histological tumour type
Ancillary findings			<ul style="list-style-type: none"> • Pheochromocytoma • Extra-adrenal paraganglioma • Composite pheochromocytoma <ul style="list-style-type: none"> o Neuroblastoma, specify o Ganglioneuroma, specify o Malignant peripheral nerve sheath tumour, specify • Composite paraganglioma <ul style="list-style-type: none"> o Neuroblastoma, specify o Ganglioneuroma, specify o Malignant peripheral nerve sheath tumour, specify • Other, specify
G4.01	*Ancillary studies	See p3	

G3.01 Adverse features

Histological features

(Select all that apply)

- Growth pattern
 - Large and irregular nests
 - Diffuse
 - Pseudorosette (even focal)
- Cellularity
 - Moderate (150-250 cells/U)
 - High (>250 cells/U)
 - Indeterminate
- Cytological features
 - Spindle cells
- Necrosis
 - Comedonecrosis
 - Other, *specify*
- Other, *specify*

Other features

- Extra-adrenal abdominal or mediastinal location
- Size >50 mm
- Negative staining for SDHB
- Biochemical test showing high level methoxytyramine

Other histopathological features

- Adenoma
- Hyperplasia
- Other, *specify*

Other

S3.02 Extent of invasion

- Cannot be assessed
- Capsular invasion not present

OR (Select all that apply)

- Microscopic transcapsular penetration of tumour capsule within an organ
- Microscopic transcapsular penetration of organ capsule
- Invasion into peritumoural soft tissue
- Invasion into adjacent structure(s)/organ(s), *specify*

S3.04 Lymphovascular invasion

Not specified*

OR (Select all that apply)

- Present
 - Periadrenal or peritumoural for extra-adrenal tumours, *specify*
 - Intracapsular
 - Extracapsular
 - Adrenal vein
 - Vena cava
 - Other (e.g. adrenal central vein and tributaries), *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
- T1 Pheochromocytoma <5 cm in greatest dimension, no extra-adrenal invasion
- T2 Pheochromocytoma ≥5 cm or paraganglioma-sympathetic of any size, no extra-adrenal invasion
- T3 Tumour of any size with invasion into surrounding tissues (e.g. liver, pancreas, spleen, kidneys)

Phaeochromocytoma: within adrenal gland

Paraganglioma sympathetic: functional

Paraganglioma parasympathetic: nonfunctional, usually in the head and neck region

*Note: Parasympathetic paraganglioma are not staged because they are largely benign.

Regional lymph node (N)

- NX Regional lymph nodes cannot be assessed
- N0 No lymph node metastasis
- N1 Regional lymph node metastasis

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G4.01 Ancillary studies

Not performed

OR

(Select all that apply):

- Immunohistochemistry performed
 - Synaptophysin, *specify result*
 - S-100, *specify result*
 - SDHB, *specify result*
 - Tyrosine hydroxylase, *specify result*
 - Other, *specify*
- Molecular testing performed, *specify result(s) if available*
- Other, *specify*