

# A guide to Rectal Cancer Histopathology Reporting



Clinical details		Macroscopic findings (cont.)	
<b>S1.02 Clinical information provided on request form</b> (complete as narrative or use the structured format below)	Text	<b>G2.03 Polyps</b>	Absent Present
<b>Operating surgeon name &amp; contact details</b>	Text		If present, provide a polyp summary Text
<b>Perforation</b>	Absent Present	<b>G2.04 Other macroscopic comments</b>	Text
	See p3	<b>S2.09 Nature and site of blocks</b>	Text
If present, record the nature of perforation		Microscopic findings	
<b>Clinical obstruction</b>	Absent Present	<b>S3.01 Tumour type</b>	See p3
<b>Tumour location</b>	See p3	<b>S3.02 Histological grading</b>	Low grade High grade
<b>For synchronous tumours indicate each other site</b>	Text	<b>S3.03 Maximum degree of local invasion into or through the bowel wall</b>	pT1 pT2 pT3 pT4a PT4b
<b>Distance from the anal verge</b>	___ cm	<b>S3.04 Involvement of the proximal or distal resection ('cut end') margins</b>	Involved Not involved
<b>Type of operation</b>	See p3		If involved, which margin(s) Distal Proximal
<b>Pre-operative radiotherapy</b>	Yes/No		If not involved, what is clearance ___ mm OR Clearance ≥10mm
If yes, was it...	Short course Long course	<b>S3.05 Status of the nonperitonealised circumferential margin</b>	Not involved Involved
<b>Surgeon's opinion on the existence of local residual cancer postsurgery</b>	Text		If not involved, what is clearance ___ mm
<b>Involvement of adj. organs</b>	Text	<b>S3.06 Lymph node involvement</b>	Absent Present
<b>New primary cancer or recurrence</b>	New primary Regional recurr Distant met.		If present, record site(s) and number of positive lymph nodes/total no. of LN from this site Text AND ___/___
If regional (local) recurrence or distant metastasis describe	Text	<b>Isolated extra-mural tumour deposits</b>	Absent Present
<b>S1.03 Pathology accession number</b>	Text	<b>G3.01 Apical node involvement</b>	Not applicable Absent Present
<b>G1.01 Other relevant details</b>	Text	<b>S3.07 Venous &amp; sml vessel invasion</b>	
Macroscopic findings		<b>Intramural vein invasion</b>	Not identified Present
<b>S2.01 Specimen length</b>	___ mm	<b>Extramural vein invasion</b>	Not identified Present
<b>S2.02 Tumour site</b>	See p3	<b>Small vessel invasion</b>	Not identified Present Present,extensive
<b>S2.03 Maximum tumour diameter</b>	___ mm	<b>G3.02 Perineural invasion</b>	Not identified Present Present,extensive
<b>S2.04 Dist. of tumour to nearer proximal or distal 'cut end' margin</b>	___ mm	<b>S3.08 Histologically confirmed distant metastases</b>	Absent Present
<b>S2.05 Distance of tumour to the nonperitonealised circumferential margin</b>	___ mm		If present,indicate.. Site(s)
<b>S2.06 Tumour perforation</b>	Absent Present	<b>S3.09 Relevant coexistent pathological abnormalities</b>	See p3
<b>S2.07 Relationship to anterior peritoneal reflection</b>	Entirely above Astride Entirely below	<b>S3.10 Micro. residual tumour status (completeness of resection)</b>	Text
<b>S2.08 Intactness of mesorectum</b> (refer p3 notes)	Incomplete Near complete Complete		
<b>G2.01 Peritoneum</b>	See p3		
<b>G2.02 Lymph nodes</b>	Not recieved Received ___ /cassette		
If received, record number of nodes per cassette			

## Microscopic findings (cont.)

<b>S3.11</b>	<b>Response to neoadjuvant therapy</b> (refer to Notes p3)	Grade 0 Grade 1 Grade 2 Grade 3
<b>G3.03</b>	Microscopic comments	Text

## Ancillary test findings

<b>G4.01</b>	Mismatch repair enzymes:	
	MLH-1	Not tested Normal staining Loss of staining
	PMS-2	Not tested Normal staining Loss of staining
	MSH-2	Not tested Normal staining Loss of staining
	MSH-6	Not tested Normal staining Loss of staining
	Comments	Text
	Microsatellite instability (MSI)	Unstable Stable Not tested
	Laboratory performing test and report number	Text
	Comments	Text
	BRAF (V600E mutation)	Mutated Wild type Not tested
	Laboratory performing test and report number	Text
	Comments	Text
<b>G4.02</b>	RAS gene mutation testing (KRAS exons 2,3, or 4, NRAS exons 2,3 or 4 or RAS mutation)	Mutated Wild type Not tested
	Laboratory performing test and report number	Text
	Comments	Text

## Synthesis and overview

<b>S5.01</b>	<b>Tumour stage and stage grouping</b>	See p2
<b>S5.02</b>	<b>Year and/or edition of staging system</b>	Text
<b>S5.03</b>	<b>Residual tumour status</b>	See p3
<b>G5.01</b>	Diagnostic summary Include: a. specimen type (S1.02) b. tumour site (S2.02) c. tumour type (S3.01) d. tumour stage (S5.01) e. completeness of excision (S5.03)	Text
<b>S5.04</b>	<b>New primary cancer or recurrence</b>	New primary Regional recurr Distant met. Indeterminate
	If regional (local) recurrence or distant metastasis describe	Text
<b>S5.05</b>	<b>Overarching comments</b>	Text

## S5.01 Tumour stage\*\*

### T classification Primary tumour

TX	Primary tumour cannot be assessed
T0	No evidence of primary tumour
Tis	Carcinoma in situ: intraepithelial or invasion of lamina propria
T1	Tumour invades submucosa
T2	Tumour invades muscularis propria
T3	Tumour invades through the muscularis propria into pericorectal tissues
T4a	Tumour penetrates to the surface of the visceral peritoneum
T4b	Tumour directly invades or is adherent to other organs or structures

### N classification Regional lymph nodes

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Metastasis in 1-3 regional lymph nodes
N1a	Metastasis in one regional lymph node
N1b	Metastasis in 2-3 regional lymph nodes
N1c	Tumour deposit(s) in the subserosa, mesentery, or nonperitonealised pericolic or perirectal tissues without regional nodal metastasis
N2	Metastasis in 4 or more regional lymph nodes
N2a	Metastasis in 4-6 regional lymph nodes
N2b	Metastasis in 7 or more regional lymph nodes

### M classification Distant metastasis

M0	No distant metastasis
M1	Distant metastasis
M1a	Metastasis confined to one organ or site (e.g. liver, lung, ovary, nonregional node)
M1b	Metastases in more than one organ/site or the peritoneum

### Stage Grouping

Stage	T	N	M
0	Tis	N0	M0
I	T1	N0	M0
	T2	N0	M0
IIA	T3	N0	M0
IIB	T4a	N0	M0
IIC	T4b	N0	M0
IIIA	T1-T2	N1/N1c	M0
	T1	N2a	M0
IIIB	T3-T4a	N1/N1c	M0
	T2-T3	N2a	M0
	T1-T2	N2b	M0
IIIC	T4a	N2a	M0
	T3-T4a	N2b	M0
	T4b	N1-N2	M0
IVA	Any T	Any N	M1a
IVB	Any T	Any N	M1b

\*\*Used with the permission of the American Joint Committee on Cancer (AJCC), Chicago, Illinois. The original source for this material is the AJCC Cancer Staging Manual, Seventh Edition (2010) published by Springer Science and Business Media LLC, www.springerlink.com.

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## NOTES

### S1.02 Nature of perforation

- Through tumour prior to surgery
- Through tumour during surgical mobilisation
- Away from tumour

### S1.02 Tumour location

### S2.02 Tumour site

- Caecum
- Ascending colon
- Hepatic flexure
- Transverse colon
- Splenic flexure
- Descending colon
- Sigmoid colon
- Rectosigmoid junction
- Rectum

### S1.02 Type of operation

- Right hemicolectomy
- Extended right hemicolectomy
- Transverse colectomy
- Left hemicolectomy
- Anterior resection (High, Low, Ultralow)
- Abdominoperineal resection
- Proctocolectomy
- Total colectomy with ileorectal anastomosis
- Hartmann's procedure
- Other procedure(s) (specify)

### G2.01 Peritoneum

- Tumour invades to the peritoneal surface
- Tumour has formed nodule(s) discrete from the tumour mass along the serosal surface

### S2.08 Intactness of mesorectum

Incomplete:

little bulk to the rectum, defects in the mesorectum down to the muscularis propria, after transverse sectioning the circumferential margin appears very irregular.

Nearly complete:

moderate bulk to the mesorectum, irregularity of the mesorectal surface with defects greater than 5 mm but none extending to the muscularis propria, no areas of visibility of the muscularis propria except at the insertion site of the levator ani muscles

Complete:

Intact bulky mesorectum with a smooth surface, only minor irregularities of the mesorectal surface, no surface defects greater than 5 mm in depth, no coning towards the distal margin of the specimen, after circumferential sectioning the circumferential margin appears smooth.

### S3.01 Tumour type

- Adenocarcinoma, NOS
- Cribriform comedo-type adenocarcinoma
- Medullary carcinoma, NOS
- Micropapillary carcinoma
- Colloid carcinoma
- Serrated adenocarcinoma
- Signet ring cell carcinoma
- Adenosquamous carcinoma
- Spindle cell carcinoma, NOS
- Squamous cell carcinoma, NOS
- Undifferentiated carcinoma

### S3.10 Relevant coexistent pathological abnormalities

- None noted
- Polyps (describe type, number, polyposis syndrome criteria met etc)
- Ulcerative colitis (with dysplasia/without dysplasia)
- Crohn's disease (with dysplasia/without dysplasia)
- Other (specify)

### S3.11 Response to neoadjuvant therapy

No prior treatment

Grade 0 (complete response)

Grade 1 (moderate response)

Grade 2 (minimal response)

Grade 3 (poor response)

No viable cancer cells

Single cells or small groups of cancer cells

Residual cancer outgrown by fibrosis

Minimal or no tumour kill; extensive residual cancer.

### S5.02 Residual tumour status\*\*

- R0: Complete resection, margins histologically negative, no residual tumour left after resection (primary tumour, regional nodes)
- R1: Incomplete resection, margins histologically involved, microscopic tumour remains after resection of gross disease (primary tumour, regional nodes)
- R2: Incomplete resection, margins macroscopically involved or gross disease remains after subtotal resection (eg primary tumour, regional nodes, or liver metastasis).