**Northern Ireland**

**Bowel Cancer Screening Programme**

# Histopathology Protocols

| | |
|---|---|
| **Version:** | **1.4** |
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| **Approved By:** | **NI BCSP Histopathology QA Subgroup, QA Lead for Histopathology and NI BCSP QA Committee** |
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Changes to this document will be version controlled, led by the Histopathology Quality Assurance Lead for the Programme. Any updated versions will be circulated and old versions should be withdrawn.

## CONTENTS

# Histopathology Protocols for Bowel Cancer Screening Specimens

## 1 Introduction

This document details the protocols which should be adhered to in relation to clinical and histopathologic handling of specimens procured from bowel cancer screening (BCS) endoscopy procedures or subsequent local or surgical excisions. As such, these protocols are relevant to BCS endoscopists, surgeons and pathologists. The content is consistent with current Royal College of Pathologists (UK) dataset for histopathological reporting of colorectal cancer[1], follows the guidance of UICC TNM 8 staging[2] and the 2019 World Health Organization classification of tumours of the digestive system[3] and takes into consideration 2020 British Society of Gastroenterology / Public Health England / Association of Coloproctology of Great Britain and Ireland guidelines on post-polypectomy surveillance[4].Those engaged with the programme should make every effort to adhere to these protocols and achieve the associated standards expected.

[1] The Royal College of Pathologists (2018). *Dataset for histopathological reporting of colorectal cancer*. Available from: https://www.rcpath.org/uploads/assets/c8b61ba0-ae3f-43f1-85ffd3ab9f17cfe6/G049-Dataset-for-histopathological-reporting-of-colorectal-cancer.pdf (Accessed September 21st, 2020).

[2] Brierley JD, Gospodarowicz MK and Wittekind C (eds) (2016). *UICC TNM Classification of Malignant Tumours, 8th Edition*, Wiley-Blackwell, New York.

[3] Nagtegaal ID, Arends MJ, Odze RD and Lam AK (2019). Tumours of the colon and rectum. In: *Digestive System Tumours. WHO Classification of Tumours, 5th Edition*, Lokuhetty D, White V, Watanabe R and Cree IA (eds), IARC Press, Lyon, France.

[4] Rutter MD, East J, Rees CJ, et al. British Society of Gastroenterology/Association of Coloproctology of Great Britain and Ireland/Public Health England post-polypectomy and post-colorectal cancer resection surveillance guidelines. *Gut* 2020;69:201-223.

## 2 Endoscopy

The screening endoscopist must complete and sign a histopathology request form to include patient demographic details (name, address, sex, date of birth), Health and Care (H&C) number, date of endoscopy, relevant clinical information and endoscopic findings, and the name and code of the responsible consultant screening colonoscopist. The request form should clearly indicate, by means of a BCS label or stamp, that this is a BCS specimen. A copy of the endoscopy report should be provided along with the request form.

The precise number and respective site(s) of polyps submitted for histology should be specified on the request form. Each individual polyp should be submitted in separate specimen pots appropriately labelled. If a polyp has been removed piecemeal or biopsied multiple times, this should be clearly indicated, to avoid mistaking as multiple polyps. If a large number of polyps are biopsied, these may be submitted with more than one polyp per pot, but in this event the polyps must be grouped regionally (rectum, sigmoid colon etc.) and the number of polyps submitted in each pot specified. This is to ensure that, in the event of an unexpected diagnosis of cancer, the anatomical site can be ascertained. The request form or report should clearly state if each polyp has been endoscopically removed or only biopsied/partially removed.

Any clinical suspicion of malignancy should be clearly indicated on the request form, in addition to any record of such suspicion within the endoscopy report. This is to minimise the risk of such important information being overlooked in the histopathology laboratory.

## 3 Histopathology Laboratory

### 3.1 Booking-in:

Following transfer to the designated histopathology laboratory, the BCS case is booked into the regional histopathology laboratory information management system (LabCentre), using the H&C number as the primary basis for patient identification. BCS source codes have been generated for each of the BCS endoscopy units and for each BCS endoscopist. These source codes should be employed for all BCS specimens, according to the appropriate source as follows:

| | |
|---|---|
| Altnagelvin Hospital (WT) | AH/BSC |
| Belfast City Hospital (BT) | BCH/BSC |
| Craigavon Area Hospital (ST) | CAH/BSC |
| Daisy Hill Hospital (ST) | DHH/BSC |
| Downe Hospital (SET) | DH/BSC |
| South-West Acute Hospital (WT) | ERN/BSC |
| Lagan Valley Hospital (SET) | LVH/BSC |
| South Tyrone Hospital (ST) | STH/BSC |
| Tyrone County Hospital (TCH) | TCH/BSC |
| Ulster Hospital Dundonald (SET) | UHD/BSC |
| Whiteabbey Hospital (NT) | WHA/BSC |

### 3.2 Specimen Handling:

The specimen is handled according to the routine laboratory procedure for endoscopy biopsy, polypectomy, local excision or surgical resection specimens (refer to individual laboratory SOP documentation). Such specimens are no different to those encountered in the non-screening setting. The vast majority are endoscopic specimens received in formalin. These typically fix in formalin overnight and are transferred to cassettes for processing, with the number of polyps or mucosal fragments in each specimen recorded.

Polypectomy specimens must be carefully measured macroscopically. Diminutive (≤ 5 mm) polyps should have the single largest dimension recorded. Larger polyps should be measured in three dimensions in mm. Rounding up or down of measurements (terminal

digit preference) should be avoided given the potential clinical importance of 5 mm and 10 mm cut-offs, in relation to stratification of individuals for surveillance[4]. It is recommended that these measurements are recorded in a systematic fashion, for example length x breadth x height, with an indication of any stalk present and its measurement provided separately. This approach conveys the maximum macroscopic information to the reporting pathologist.

Inking of the lesion base is not considered necessary on a routine basis as the excision margin is usually readily identifiable microscopically, often through the presence of diathermy artefact. Diminuitive or small polyps may be submitted intact or bisected prior to processing. If a polyp has been bisected, this should be clearly conveyed to the reporting pathologist. Polyps with a narrow stalk should be trimmed to keep the stalk intact and orientated to allow clear visualisation of the polyp base margin, through additional levels if necessary. Polyps with a broader stalk, or sessile polyps, should be serially sectioned at 3 mm intervals, perpendicular to the base margin if this is identifiable. Given the potential clinical significance of polyp size it is important that larger polyps received intact are sectioned along their longest axis, so that the maximum dimension can be represented on the glass slide for microscopic measurement. If the longest axis within an intact polypectomy specimen is not presented on the glass slide, it is important that this information is conveyed to the reporting pathologist by the dissector to avoid potential underestimation of overall polyp size. This is particularly important around the 5 mm and 10 mm cut-offs. All tissue should be processed for histological evaluation.

### 3.3 Reporting:

1. Slides and request form are given to a consultant pathologist responsible for reporting BCS specimens as per laboratory rota.
2. The specimen is reported using the relevant dataset applicable to the specimen type and diagnosis. There are three datasets (Appendices 1-3), the latter two modified from the latest applicable Royal College of Pathologists (UK) datasets (4th edition, 2018)[1]:

- BCSNI endoscopic biopsy dataset
- Colorectal cancer local excision dataset
- Colorectal cancer resection dataset

3. The clinical summary should include an indication of the BCS nature of the specimen. The endoscopic estimate of any polyp sizes should be included in the clinical summary to allow comparative audit with the histological assessment.
4. One endoscopic biopsy dataset is completed for each specimen submitted and, in the case of a BCS-related cancer resection specimen (including cancers within polypectomy specimens), the relevant colorectal cancer dataset is completed. Freetext comments may be added as required.
5. Polyp categorisation and grading dysplasia should follow criteria of the 2019 World Health Organization classification of pre-malignant polyps[3]. Accurate lesion sizing requires careful macroscopic and microscopic correlation. The current available evidence indicates that the pathology size of adenomas is more accurate and reliable than the endoscopy size and as such the pathology size of polyps is used for clinical decision making if both sizes are available[5]. The aim of the reporting pathologist should be to report the single maximum dimension of the lesion. In many cases, this will equate to the maximum macroscopic dimension of the formalin-fixed lesion, if all of the specimen is lesional i.e. microscopically no normal mucosa is included.

   In some polyps, large size or unusual configuration may preclude representation on the glass slide of the largest lesion axis. In such cases, if microscopy demonstrates that the entire lesion is lesional then the largest macroscopic dimension of the lesion, after formalin fixation, can be safely recorded as the maximum diameter. If the specimen includes a non-lesional component, then the maximum microscopic dimension of the lesion is recorded. If a polyp is received piecemeal, the endoscopic size only is recorded.
6. Regarding assessment of completeness of excision, in general the endoscopy impression is more important than that of pathology assessment. No useful comment can be made by pathology in the setting of a piecemeal resection specimen. For intact polypectomy specimens, the pathologist can only comment on any involvement of a diathermied margin by dysplasia (and specify high or low grade). This does not equate to incomplete excision as diathermy may destroy a zone (up to several millimetres) of normal tissue, creating the impression of incomplete excision. Therefore, the phrase ‘involvement of diathermied margin by dysplasia’ is preferred to ‘excision incomplete’ in this setting. It should be emphasised that the vast majority of diminutive polypectomy

[5] Taylor JL, Coleman HG, Gray RT, et al. A comparison of endoscopy versus pathology sizing of colorectal adenomas and potential implications for surveillance colonoscopy. *Gastrointest Endosc* 2016;84:341-351.

specimens are not oriented and residual margin involvement by dysplasia is not assessable.

7. In the context of a complete baseline colonoscopy, with adequate bowel preparation, caecal intubation and clearance of all premalignant polyps, individuals are risk stratified for consideration of future surveillance according to the pathological findings and specifically the numbers of 'premalignant' and 'advanced' colorectal polyps identified. These are defined according to new British Society of Gastroenterology / Public Health England / Association of Coloproctology of Great Britain and Ireland guidelines on post-polypectomy surveillance, summarised in Table 1[4].It is useful to provide in relevant BCS pathology reports a summary regarding the presence or absence of high risk criteria, to help inform the endoscopist's decision regarding future surveillance. It should be emphasised however that, if the above criteria are not met, such as when colonoscopy is incomplete, the primary procedure is a sigmoidoscopy or if one or more lesion has been identified at endoscopy but not removed (or removed but not retrieved) then application of this management algorithm is inappropriate and the corresponding data item on the pathology report should be recorded as "not applicable" or "not established". To avoid potentially inappropriate classification of individuals as 'low risk', it is important all such endoscopic information is conveyed to the BCS pathologist prior to reporting. Ultimate responsibility for management decisions regarding surveillance remains with the consultant endoscopist, taking into consideration pathology and endoscopy findings.
8. Appropriate SNOMED codes for each polyp are entered into LabCentre at the time of reporting and checked prior to authorisation of the final report (see Appendix 4, list of recommended SNOMED codes). In the case of a diagnosis of polyp cancer, or if there is any doubt about any diagnosis, a second opinion should be sought from one or more other BCS pathologists, the name of the other pathologist(s) recorded in the pathology report and the appropriate SNOMED code added. Separate SNOMED codes have been provided for recording intra-departmental and external second opinions. All specimens should have the P206000 "Screening Procedure" SNOMED code added.

## Table 1[6]

| NEW HIGH RISK IF… | | DEFINITIONS | OUTCOME |
|---|---|---|---|
| **5 or more** | Premalignant polyp | • All adenomas<br>• All SSLs (sessile serrated lesions)<br>• Hyperplastic polyps (**excluding** RECTAL hyperplastic polyps ≤ 5mm) | • One-off 3 year surveillance (deemed high risk) |
| **2 or more**<br>**OR**<br>**1 plus 1 or more premalignant polyp** | Advanced colorectal polyp | • SSLs ≥10mm<br>• Hyperplastic polyps ≥10mm<br>• SSLs with dysplasia<br>• All TSAs<br>• Adenomas ≥10mm<br>• All adenomas with high grade dysplasia | • One-off 3 year surveillance (deemed high risk) |
| _ | NPCP **without histological confirmation of complete excision** | • Non-pedunculated SSL 10-19mm<br>• Non-pedunculated adenoma 10-19mm<br>• Non-pedunculated hyperplastic polyp 10-19mm | • Consider site check at 2-6 months then follow appropriate pathway thereafter |
| _ | LNPCP **without histological confirmation of complete excision** | • Non-pedunculated SSL ≥20mm<br>• Non-pedunculated adenoma ≥20mm<br>• Non-pedunculated hyperplastic polyp ≥20mm | • Requires site check at 2-6 months<br>• Further site check at 12 months<br>• Further one-off surveillance colonoscopy 3 years later |
| **1 or more**<br><br>*(not high risk but requires follow up)* | LNPCP ***with*** histological confirmation of complete excision | • Non-pedunculated SSL ≥20mm<br>• Non-pedunculated adenoma ≥20mm<br>• Non-pedunculated hyperplastic polyp ≥20mm | • One-off surveillance colonoscopy 3 years later |

[6] Table 1. Post-polypectomy surveillance guidelines 2020 (Modified from Rutter et al,[4]) SSL, sessile serrated lesion; TSA, traditional serrated adenoma; NPCP, non-pedunculated colorectal polyp; LNPCP, large non-pedunculated colorectal polyp.

## 4 Histopathology Databases

Two regional histopathology databases are maintained, one collecting all data pertaining to BCS endoscopy specimens, the second collecting all data relating to BCS-detected colorectal adenocarcinomas (other cancers, such as lymphoma, melanoma or squamous cell carcinoma, are considered “incidental” findings and not recorded in this database). These databases are used to derive relevant quality assurance standards and for audit of pathology findings within the programme. The endoscopy database is updated locally by each histopathology laboratory, using the Lab Centre source code to identify cases and completing an appropriate excel database template corresponding to the fields in the endoscopic biopsy dataset (Appendix 1). Quarterly updates are provided by each laboratory to the BCSP Information Officer for central collation and analysis. Returns are expected within one month following the end of each quarter, to allow time for specimen processing and reporting and local data entry.

The BCS pathology cancer database is compiled centrally by searching Lab Centre (using the Path Manager facility) for BCS cases, booked in under the relevant Bowel Screening Centre source codes, which have had a SNOMED diagnosis of ‘adenocarcinoma’ (M81403), ‘mucinous adenocarcinoma’ (M84803), ‘signet ring cell carcinoma’ (M84903), ‘undifferentiated carcinoma’ (M80203), ‘adenocarcinoma in adenomatous polyp’ (M82103) ‘atypia suspicious for malignancy’ (M67060), ‘severe dysplasia’ (M74003), ‘squamous cell carcinoma (M80103) or ‘carcinoma’ (M80703) applied. This is correlated with a similar search of the endoscopic biopsy database. High grade (severe) dysplasia may represent either sampling from the surface of an adenocarcinoma or alternatively a benign adenoma. Endoscopic biopsies from the surface of cancers may yield only low-grade dysplasia or entirely non-neoplastic, e.g. inflammatory, tissue on histological examination. Cancers from which diagnostic material has not been obtained at endoscopy, but which may have proceeded to surgery on the basis of clinical suspicion, may therefore not be identified by the above search criteria. If there is clinical suspicion of malignancy, this should be flagged as a comment in the endoscopic biopsy database, to permit a search of Lab Centre for follow-up biopsies or surgical resection on such cases. It should be noted that it is inevitable some cancers will still be missed with this approach if clinical suspicion is not indicated on the request form. Similarly some resections follow cancer detection by CT colonography, so will not be picked up by any trawl of BCS endoscopy specimens. A crosscheck exercise between the histopathology cancer database and the Bowel

Screening Information Management System (BSIMS) is performed regularly to audit this. For the above reasons, the BSIMS database is more complete and represents the gold standard resource for identification of BCS-detected cancers.

## 5 Turnaround Times

Turnaround times (TATs) represent one indicator of service quality. These are compiled by the BCSPInformation Officer requesting relevant data from PathManager on a quarterly basis. Each laboratory is encouraged to monitor their own TATs in addition, both for validation purposes and to detect any potential problems with TATs as early as possible.

The revised national standards for the NHS Bowel Cancer Screening Programme were updated in August 2018 and adopted by the Northern Ireland Bowel Cancer Screening Programme. They are available at: https://www.gov.uk/government/publications/bowel-cancer-screening-programme-standards/bowel-cancer-screening-programme-standards-valid-for-data-collected-from-1-april-2018. These measure TATs from date of specimen receipt in the laboratory. The minimum standard is that 90% of BCS cases should be reported within 7 days of specimen receipt. The date of receipt represents day 0. Any case which is authorised at any time on day 7 meets this standard. Those authorised on day 8 or thereafter do not.

In accordance with Royal College of Pathologists recommendations for Key Performance Indicators (2013), TATs can also be calculated from the date of endoscopic procedure rather than date of specimen receipt in the laboratory. This approach enables identification of any transport problems which may result in clinically meaningful delays. Here, the date of procedure represents day 0. The NI BCSP adopted minimum standard is that 80% of BCS cases should be reported within 7 days of the procedure. Any case which is authorised at any time on day 7 meets this standard. Those authorised on day 8 or thereafter do not.

These two measures of TAT are considered broadly similar and monitoring of both is currently recommended until further notice, to gauge impact of the change to the new TAT definition and to utilise both data items to identify time associated with specimen transport from endoscopy units to the laboratory.

TATs are derived centrally by the BCSPInformation Officer, the data then supplied to the regional QA lead for pathology and disseminated to each histopathology laboratory BCS lead.

## References

1. The Royal College of Pathologists (2018). *Dataset for histopathological reporting of colorectal cancer*. Available from: https://www.rcpath.org/uploads/assets/c8b61ba0-ae3f-43f1-85ffd3ab9f17cfe6/G049-Dataset-for-histopathological-reporting-of-colorectal-cancer.pdf (Accessed September 21st, 2020).

2. Brierley JD, Gospodarowicz MK and Wittekind C (eds) (2016). *UICC TNM Classification of Malignant Tumours, 8th Edition*, Wiley-Blackwell, New York.

3. Nagtegaal ID, Arends MJ, Odze RD and Lam AK (2019). Tumours of the colon and rectum. In: *Digestive System Tumours. WHO Classification of Tumours, 5th Edition*, Lokuhetty D, White V, Watanabe R and Cree IA (eds), IARC Press, Lyon, France.

4. Rutter MD, East J, Rees CJ, et al. British Society of Gastroenterology/Association of Coloproctology of Great Britain and Ireland/Public Health England post-polypectomy and post-colorectal cancer resection surveillance guidelines. *Gut* 2020;69:201-223.

5. Taylor JL, Coleman HG, Gray RT, et al. A comparison of endoscopy versus pathology sizing of colorectal adenomas and potential implications for surveillance colonoscopy. *Gastrointest Endosc* 2016;84:341-351.

6. Table 1. Post-polypectomy surveillance guidelines 2020 (Modified from Rutter et al,[4]) SSL, sessile serrated lesion; TSA, traditional serrated adenoma; NPCP, non-pedunculated colorectal polyp; LNPCP, large non-pedunculated colorectal polyp.

**Appendix 1: NI BCSP Endoscopy Specimen Dataset**

**Name** **Histology lab number**

| | |
|---|---|
| Specimen number (I, II etc): | |
| Mucosal site: | Rectum Rectosigmoid Sigmoid colon<br>Desc. colon Splenic flexure Trans.colon<br>Hepatic flexure Asc. colon Caecum<br>Colon, not specified Other (specify) _____ |
| Number of tissue pieces: | |
| Size of lesion: | _____mm / unassessable (fragmented) / no polyp seen |
| Diagnosis | Tubular adenoma Tubulovillous adenoma<br>Hyperplastic polyp Sessile serrated lesion<br>Normal Other _____ |
| Dysplasia grade: | Low High None Not applicable |
| Margin involvement by lesion | Yes No Not assessable |
| Cancer in polyp: | Yes No |
| | |

**BSG 2020 'high risk' criteria:** **Yes……..No……..Not applicable**

**FURTHER COMMENTS**

**BLOCK INDEX**

**DIAGNOSIS**

**Appendix 2: Colorectal Cancer Local Excision Dataset**

**Name: _____ Biopsy No: _____ Pathologist: _____**

## GROSS DESCRIPTION

| | |
|---|---|
| **Type of specimen:** | Polypectomy / Endoscopic mucosal resection /<br>Endoscopic submucosal dissection /<br>Transanal endoscopic microsurgical excision /<br>Other |
| **Site of tumour:** | Caecum / ascending colon / hepatic flexure /<br>transverse colon / splenic flexure / descending colon /<br>sigmoid / rectosigmoid / rectum |
| **Size of specimen (max width):** | _____ mm<br>Not assessable (piecemeal) |

## HISTOLOGY

| | |
|---|---|
| **Histological tumour (sub)type:** | Adenocarcinoma<br>Mucinous adenocarcinoma<br><br>Other |
| **Differentiation (worst area):** | Well/moderate / Poor / Not applicable |
| **Local invasion (TNM 8):** | pT1 carcinoma invades submucosa<br>pT2 carcinoma invades muscularis propria<br>pT3 carcinoma beyond muscularis propria |

### For pT1 tumours:

| | |
|---|---|
| **Maximum depth of invasive tumour from muscularis mucosae:** | _____ mm |
| **Width of invasive tumour:** | _____ mm |
| **Haggitt level (polypoid):** | 1 / 2 / 3 / 4<br>Not applicable / Not assessable |
| **Kikuchi level (sessile tumours):** | SM1 / SM2 / SM3<br>Not applicable / Not assessable |
| **Lymphatic (small vessel) invasion:** | None / Intramural / Extramural |
| **Venous invasion:** | None / Intramural / Extramural |

**Perineural invasion:** None / Intramural / Extramural

**Background adenoma:** Yes / No

**Margins:** Not involved / Involved by adenoma only /
Deep margin involved by carcinoma /
Peripheral margin involved by carcinoma /
Deep and peripheral margins involved by carcinoma

**Histological measurement from carcinoma to nearest deep excision margin:** _____ mm

**Complete resection:** Yes (RO)
No - R1 (microscopic)
No - R2 (macroscopic)

**Microsatellite instability status:** Not performed
Microsatellite stable
Microsatellite instability-high

**Block index:**

**Representative primary tumour block(s):**

**FURTHER COMMENTS:**

**DIAGNOSIS:**

**Appendix 3: Colorectal Cancer Resection Dataset**

**Name:** **Biopsy No:** **Pathologist:**

_____

## GROSS DESCRIPTION

**Type of specimen:**
Total colectomy / subtotal colectomy /
right hemicolectomy / transverse colectomy /
left hemicolectomy / anterior resection /
sigmoid colectomy / Hartmann's procedure /
abdominoperineal excision /
other *(state)* _____

**Site of tumour:**
Caecum
Ascending colon
Hepatic flexure
Transverse colon
Splenic flexure
Descending colon
Sigmoid colon
Rectum (above peritoneal reflection)
Rectum (astride peritoneal reflection)
Rectum (below peritoneal reflection)
Rectum (quadrant – anterior / posterior /
right lateral / left lateral / annular)

**Length of specimen:**
**Maximum tumour diameter:**
**Nature of tumour:** Polypoid / Ulcerated / Annular
**Tumour perforation:** No / Yes
**Distance of tumour from nearer cut end:** Distal or proximal
**Distance of tumour from dentate line:**
**Plane of mesorectal excision (AR and APE):** Mesorectal fascia / intramesorectal /
muscularis propria / not applicable
**Plane of resection of sphincters (APE only):** Extralevator / sphincteric / intrasphincteric

## HISTOLOGY

**Histological (sub)type:**
Adenocarcinoma
Mucinous adenocarcinoma

Other

**Differentiation:** Well/moderate / Poor / Not applicable

**Local invasion (TNM 8):** pT1 carcinoma invades submucosa

pT2 carcinoma invades muscularis propria
pT3 carcinoma beyond muscularis propria into subserosa or pericolic/perirectal tissues
pT4a carcinoma invades other organs
pT4b carcinoma perforates visceral peritoneum

**Maximum distance of spread beyond muscularis propria:**

**Lymphatic (small vessel) invasion:** None / Intramural / Extramural

**Venous invasion:** None / Intramural / Extramural

**Perineural invasion:** None / Intramural / Extramural

**Lymph nodes:** Number of lymph nodes identified =
Number infiltrated by tumour =

**Apical node:** Involved / Not involved
**Number of tumour deposits:**
**Peritoneal involvement:** None / Tumour at or ulcerating serosa
**Proximal margin:** Involved / Not involved
**Distal margin:** Involved / Not involved
**Proximal anastomotic ring:** Involved / Not involved / Not submitted
**Distal anastomotic ring:** Involved / Not involved / Not submitted
**Non-peritonealised circumferential margin:** Not involved / tumour $\leq$ 1mm from margin

**Histological measurement from tumour to non-peritonealised margin** _____ mm

*Non-peritonealised margin is circumferential in the rectum, usually posterior in the caecum, ascending colon and descending colon and mesocolic elsewhere*

**Pre-operative therapy given:**
Short course radiotherapy
Long course chemoradiotherapy
No
Unknown

**Response:**
No viable tumour cells (TRS 0)
Single/rare small groups of tumour cells (TRS 1)
Residual cancer with tumour regression (TRS 2)
No evident tumour regression (TRS 3)
Not applicable

**Histologically confirmed metastatic disease:**
No
Yes *(specify site(s))* _____

**pTNM staging (TNM 8):**

**Complete resection:** Yes (R0) / R1 (microscopic) or R2 (macroscopic)

**Other pathology:**

**Microsatellite instability status:** Not performed
Microsatellite stable
Microsatellite instability-high

**Block index:**

**Representative primary tumour block(s):**

**Representative lymph node metastasis block(s):**

**FURTHER COMMENTS:**

**DIAGNOSIS:**

**Appendix 4: Recommended SNOMED CODING**

| Code | General | SNOMED description |
|---|---|---|
| P206000 | Screening specimen (applied to all cases) | Screening procedure, NOS |
| | **Site** | |
| T59100 | Caecum | Caecum, Nos |
| T59420 | Ascending Colon | Ascending Colon |
| T59438 | Hepatic flexure | Right colic flexure |
| T59442 | Splenic flexure | Left colic flexure |
| T59440 | Transverse Colon | Transverse Colon |
| T59460 | Descending Colon | Descending Colon |
| T59470 | Sigmoid Colon | Sigmoid Colon |
| T59600 | Rectum | Rectum, Nos |
| T59300 | Colon, not otherwise specified | Colon, Nos |
| | **Diagnosis** | |
| M09010 | Inadequate | Specimen unsatisfactory for diagnosis |
| M00100 | Normal | Normal |
| | ***Common Polyps*** | |
| M82110 | Tubular adenoma | Tubular adenoma |
| M82630 | Tubulovillous adenoma | Tubulovillous adenoma |
| M82611 | Villous adenoma | Villous adenoma |
| M72042 | Hyperplastic polyp | Hyperplastic polyp |
| M76801 | Sessile serrated polyp/adenoma | Sessile polyp |
| M82130 | Traditional serrated adenoma | Serrated adenoma |
| M76820 | Inflammatory polyp | Inflammatory polyp |
| M31050 | Mucosal prolapse | Prolapse |
| D401035 | Peutz-Jeghers | Peutz-Jeghers syndrome |
| M75662 | Juvenile polyp | Juvenile polyp |
| | ***Other polyps*** | |
| M82403 | Endocrine cell tumour (carcinoid) | Carcinoid tumor, NOS (except of Appendix) |
| M88900 | Leiomyoma | Leiomyoma |
| M95600 | Schwannoma | Neurilemmoma |
| M95400 | Neurofibroma | Neurofibroma |
| M94900 | Ganglioneuroma | Ganglioneuroma |
| M89361 | Gastrointestinal stromal tumour | Gastrointestinal stromal tumour |
| M88500 | Lipoma | Lipoma |
| M80003 | Other polyp - Malignant neoplasm | Neoplasm, malignant |
| M80000 | Other polyp - Benign neoplasm | Neoplasm, benign |
| | ***Other pathology*** | |
| D541110 | Ulcerative colitis | Chronic ulcerative colitis |
| D541000 | Crohn's disease | Crohn's disease |
| D540990 | Inflammatory bowel disease - unclassified | Inflammatory bowel disease |
| M40000 | Other inflammation | Inflammation |
| F39340 | Ischaemia | Ischaemia |
| M09350 | Other (Morphologic description only) | Morphologic description only |
| | ***Polypoid cancer*** | |
| M82103 | Adenocarcinoma in a polyp | Adenocarcinoma in adenomatous |

| | | |
|---|---|---|
| | | polyp |
| | ***Cancer (non-polypoid)*** | |
| M81403 | Adenocarcinoma | Adenocarcinoma |
| M67060 | Suspicious of adenocarcinoma | Atypia suspicious for malignancy |
| | ***Other malignancy*** | |
| M84803 | Mucinous adenocarcinoma | Mucinous adenocarcinoma |
| M84903 | Signet ring cell carcinoma | Signet ring cell carcinoma |
| M85603 | Adenosquamous carcinoma | Adenosquamous carcinoma |
| M80703 | Squamous cell carcinoma | Squamous cell carcinoma |
| M80413 | Small cell carcinoma | Small cell carcinoma |
| M80203 | Undifferentiated carcinoma | Undifferentiated carcinoma |
| M82443 | Mixed carcinoid-adenocarcinoma | Composite carcinoid |
| M80103 | Carcinoma, other | Carcinoma, other |
| M87203 | Malignant melanoma | Malignant melanoma |
| | ***Dysplasia*** | |
| M74001 | Low grade dysplasia | Mild dysplasia |
| M74003 | High grade dysplasia | Severe dysplasia |
| | **Miscellaneous** | |
| P210600 | Double reported (within department)* | Confirmatory medical consultation, NOS |
| P020510 | Second opinion (from external pathologist)* *add name of second BCS pathologist on report | Patient referral for consultation, NOS |

# NI BCSP

# Histopathology Protocols

| DOCUMENT REVIEW | |
|---|---|
| **Version** | **1.4** |
| **Review Date** | **August 2021** |
| **Approved by** | **NI BCSP Histopathology QA Subgroup, QA Lead for Histopathology and NI BCSP QA Committee** |
| **Date Approved** | **August 2021** |
| **New Review Date** | **August 2024** |

**SUMMARY OF CHANGES**

| Version | Date | Author(s) | Notes on Revisions/Modifications |
|---|---|---|---|
| 1.0 | 04/05/10 | M Loughrey | |
| 1.2 | 05/03/13 | M Loughrey | Changes to Appendix 1 agreed at Histopathology QA Subgroup on 05/03/13 |
| 1.3 | 01/03/15 | M Loughrey | Change to definition of TAT and formatting of document |
| 1.4 | 31/03/21 | M Loughrey | Major revisions in light of new national and international documentation |
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