Histopathology reporting in colorectal cancer

Accurate macroscopic and microscopic evaluation of the pathology specimen in rectal cancer helps predict the risk of local recurrence, survival [1,2], and the need for adjuvant therapy [3]. Reporting on the quality of the mesorectum and circumferential margin in an excised specimen of rectal and colon cancer, on lymph node involvement, and the total number of lymph nodes harvested, is of paramount importance [1,4]. Despite this, recent audits of pathology reports have shown a lack of consistency and a shortfall in reporting [5].

The aim of our study was to assess the completeness of pathology reporting by trained colorectal pathologists working in a multidisciplinary team over a period of at least 5 years, based on guidelines of National Minimum Data Set (NMDS) for colorectal cancer published by the UK Royal College of Pathologists.

Histopathology reports of 82 consecutive patients (rectal cancer 47, colon cancer 35) who underwent surgery were reviewed by one author who is not a pathologist. Information obtained from free-text pathology reports was recorded on a proforma, incorporating 17 items for rectal cancer and 15 items for colon cancer from the NMDS (Table).

The percentage of each data item present in all the reports was calculated. The completeness of reporting (%) for each histopathology report was classified as 40-59%, >60-79% or >80-100% complete.

The percentage of each data item present in the 82 histopathology reports is shown in the Table. Only 40% of histopathology reports for rectal cancer reached completeness of reporting of 80%, and 51.5% of colon cancer histopathology reports achieved at least 80% completeness. Nearly 11% of reports of rectal cancer and colon cancer were less than 60% complete. Overall, reporting was considered 74% complete based on all data items (n=1324) in this series.

This study shows that there is wide variation in the quality of pathology reporting. The areas where information was deficient were mainly distance of tumour to the end resection margin, presence or absence of perforation at the tumour site, relation between the peritoneal reflection and rectal cancer, and reporting of nodal involvement by cancer in the most proximal node of the resected specimen.

Table. Data items assessed in the histopathology reports of colorectal carcinoma and the percentage of reports containing statements on individual data items

Description	Percentage (%)
Gross description	
1. Site of tumour	99.0
2. Maximum tumour diameter	88.0
3. Distance of tumour to nearer end (cut end)	68.5
4. Presence of tumour perforation (pN4)	58.5
5. Relation to peritoneal reflection*	55.0
6. Distance from dentate line*	2.0
Histology	
7. Type	100
8. Differentiation by predominant area	97.5
9. Local invasion	100
10. Margin Including circumferential margin in rectal carcinoma	91.5
Metastatic spread	
11. Number of lymph nodes examined	85.5
12. Number of positive lymph nodes	88.0
13. Apical lymph node involvement	33.0
14. Extramural vascular involvement	80.5
15. Background abnormality	19.5
Pathological staging	
16. TNM	77.0
17. Dukes	80.5

* Assessed only in the histopathology reports of rectal carcinoma

A statement on tumour involvement at the resection margin including the circumferential margin was noted in 91.5% of reports. Because involvement of the circumferential margin is a major predictor of local recurrence, it is essential for all pathology reports of rectal cancer to have this information, including distance from the advancing edge of rectal tumour to the circumferential resection margin. Reporting of this feature by pathologists, particularly in the early reports of this series, was scanty. Even though the main mode of metastasis of colorectal cancer is lymphatic spread, all three data items regarding lymphatic spread were reported inadequately.

Patterns of inadequacy in this study suggest that using a proforma in histopathological reporting helps maintain consistency and facilitates communication between pathologist and surgeon. For pathologists unwilling to abandon the free-text style of reporting, we suggest incorporating a checklist of data items from the NMDS in the final report.

References

1. Compton CC. Pathologic prognostic factors in the recurrence of rectal cancer. *Clinical Colorectal Cancer* 2002; **2**: 149-60.
2. Fujita S, Shimoda T, Yoshimura K, Yamamoto S, Akasu T, Moriya Y. Prospective evaluation of prognostic factors in patients with colorectal cancer undergoing curative resection. *Journal of Surgical Oncology* 2003; **84**: 127-31.
3. Wiggers T, van de Velde CJ. The circumferential margin in rectal cancer. Recommendations based on the Dutch Total Mesorectal Excision Study. *European Journal of Cancer* 2002; **38**: 973-6.
4. Nagtegaal ID, Marijnen CA, Kranenbarg EK, van de Velde CJ, van Krieken JH. Pathology Review Committee; Circumferential margin involvement is still an important predictor of local recurrence in rectal carcinoma: not one millimeter but two millimeters is the limit. *American Journal of Surgical Pathology* 2002; **26**: 350-7.
5. Keating J, Lolohea S, Kenwright D. Pathology reporting of rectal cancer: a national audit. *New Zealand Medical Journal* 2003; **25**: 116: U514.

PN Siriwardana, Surgical Registrar, University Surgical Unit, North Colombo Teaching Hospital, **SJ de S Hewavisenthi**, Professor, Department of Pathology, and **KI Deen**, Professor, Department of Surgery, Faculty of Medicine, University of Kelaniya, Sri Lanka.

Correspondence: PNS, e-mail: <pulathis_ns@yahoo.co.uk>. Received 28 March 2006. Revised version received 20 September 2006, and accepted 5 October 2006. Conflicts of interest: none declared.