AN AUDIT OF COLORECTAL CANCER
HISTOPATHOLOGY REPORTS IN A TERTIARY
HEALTH CARE CENTER IN NIGERIA

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ABSTRACT
Objective: To audit the completeness of histopathologic reports of Colorectal Cancer for prognostic information in a tertiary care hospital in the light of the minimum reporting standards for colorectal cancer resections recently proposed for use in Nigeria.

Material and Methods: Twenty-five histopathology reports of colorectal cancer from January 2012 to December 2014 were reviewed.

Results: Some of data items were mentioned in the histopathology reports, however gross description of resection specimens was inadequate, degree of differentiation of tumour, stage of tumour, lympho-vascular invasion and status of the surgical margins were poorly mentioned. The mean number of lymph nodes isolated were three and this was done in only ten cases.

Conclusion: The quality of histopathology reports is unsatisfactory. Action should be taken to improve the histopathologic reports by adopting in full the proposed proforma for reporting colorectal cancer resection specimens in Nigeria.

INTRODUCTION
Histopathologic examination and reporting of colorectal cancer specimen is indispensable in the management of affected patients.1 It confirms diagnosis with accurate typing of cancer and describes the factors that affect prognosis, such as pathologic stage and completeness of local excision, lymph node status, lympho-vascular invasion and margin status that affect the overall management of the patient.2 It also provides an assessment of the effect of new adjuvant therapy
Audit of colorectal cancer histopathology

Aims to improve the quality and consistency of results generated in Nigeria.

The purpose of this study is to look at the quality and completeness of histopathologic reports on the basis of the minimum reporting standards for colorectal cancer resections in Nigeria guidelines in the last 3 years.

MATERIALS AND METHOD

This is a retrospective evaluation of histopathology reports of postoperative specimen of twenty five (25) colorectal cancer resections in the Department of Pathology at the University of Benin teaching hospital, Benin City, Edo state, Nigeria from January 2012 to December 2014.

Result and data were assessed and checked for completeness of data items as proposed in the recommended the minimum reporting standards for colorectal cancer resections in Nigeria guidelines. Data items such as the biodata, number of lymph nodes and status, gross description, margins and other parameters were assessed. Only the information contents of reports were audited and not the diagnostic precision.

Resection colectomy specimens from other causes like ulcerative colitis, diverticulosis, granulomatous inflammation, trauma and perforation other than that due to malignancy were excluded from the study.

RESULTS

Patient biodata, biopsy specimen type, site of tumour and histologic diagnosis were stated in all reports. The margins (cut end) was stated in 80% of the reports. Maximum tumour diameter on gross examination was written in 68% of the reports. This was followed by local invasion/staging that was stated in 56% of reports. Lymphnodes were isolated in twelve cases (48%) with a mean isolated number of three lymphnodes and a maximum number of nine lymphnodes. Differentiation of tumour by predominant area and distance of tumour to nearer cut end was only stated in 36% and 20% of reports respectively. Vascular invasion was mentioned in just two reports while only one report had mention of tumour perforation on gross examination. Gross description for rectal tumours, gross description for abdominopelvic resection, response to neoadjuvant...
DISCUSSION

Audit is a systemic and independent examination to determine whether quality activities and related results comply with the planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve the objective. It is an integral part of clinical governance, with links to both risk management program and evidence based practice. As part of their risk management strategy Histopathology Departments should use audit to minimize the chances of an incorrect/misleading report.

We audited the information content of our histopathology reports of colorectal cancer. We have not investigated the diagnostic precision, the way that the specimens have been handled and the samples of the specimen for microscopic examination.

Our results show that histopathologic diagnosis was documented in all cases. However the degree of tumour differentiation and the TNM staging was documented in only 36% and 56% respectively of the reports. These are recognized histopathologic prognostic factors in colorectal cancer which add value to the quality of the report. TNM staging for colorectal cancer provides more details and has better inter-observer correlation and should be included in all histopathology reports. Provided with a complete set of data, the clinician can stage the patient, however a concluding statement in the pathologic stage will greatly facilitate cancer registration.

Although the margins of resection are mention in 80% of cases, doughnuts and circumferential margins are poorly documented. Involvement of both types of margins, have prognostic implications in colorectal cancer management and complement the report.

Other important data that were poorly documented include the presence and absence of lymph node metastasis (48%) and the apical lymph
Apical lymph node metastasis is a strong independent negative prognostic factor of poor survival in colorectal cancer. In the majority of cases, the apical lymph node status can be assumed to be negative if the overall nodal status was reported as negative. Nevertheless apical lymph node may not have been identified and this could have implications in patient management.

In the present study the maximum number of lymph node reported with any sample was nine (9), with a mean of 3 lymph nodes. This is insufficient and below the standard range mentioned by International Union against Cancer and National Cancer Institute (NCI) consensus panel. The College of American Pathologists also recommends the examination of at least 12 nodes in order to accurately predict node negativity. If fewer than 12 nodes were found after thorough gross examination, additional visual enhancement techniques are recommended.

Lymph node retrieval has been shown to be intimately linked with rates of circumferential margin status, peritoneal involvement and extramural vascular invasion because the more diligently the pathologist looks for lymph nodes, the better the examination of the specimen and the reporting of important factors. The total number of lymph nodes retrieved therefore appears a good measure of the quality of pathology. Under sampling lymph nodes in cancer specimens can lead to under-staging and mis-utilization of adjuvant chemotherapy.

Perineural and Lympho-vascular invasion are poorly documented in our reports (8%). The presence and absence of perineural and lympho-vascular invasion gives reliable prediction of recurrences after resection and better selection of patient for adjuvant systemic chemotherapy. Intestinal perforation an important complication in colorectal cancer and is associated with advance disease. Perforated tumor causes peritonitis, sheds malignant cells into the peritoneal cavity and is regarded as pT4 irrespective of other factors. The presence or absence of perforation was documented in only one report.

Regarding rectal tumor, relationship of tumor to peritoneal reflection and involving circumferential resections margin were not documented. Both these are important prognostic factors and have high predictive value for both survival and recurrence. Therefore it is vital that both factors are properly documented in the reports. Audit reports done in other countries also poorly represented these factors. In a study done by Beattie et al in 1996, relationship of tumor below peritoneal reflection was mentioned in only 1% of the reports.

CONCLUSION
Overall, the histopathology reports of colorectal cancer was unsatisfactory. Staging, resection margin (goughnuts), apical lymph node involvement, lymphovascular invasion, perineural invasion, background pathologic abnormalities, circumferential resection margin involvement and relationship to peritoneal reflection in rectal tumor were poorly documented.

RECOMMENDATION
It is strongly recommended that template-based proforma should be implemented for improving the quality of histopathologic reports.

REFERENCES


