The Adequacy of Lymph Node Retrieval in Colorectal Cancer Cases in A Low Resource Limited Setting

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Introduction:

Colorectal cancer (CRC) remains a significant global health burden, particularly in the low-resource setting of Barbados where resources are limited. Accurate staging critically depends on adequate lymph node retrieval (at least 12) during surgical resection, which guides subsequent management (1,2,3). This study aims to evaluate the adequacy of nodal retrieval and its association between demographic/tumour-related characteristics in colorectal cancer surgeries within a low-resource setting.

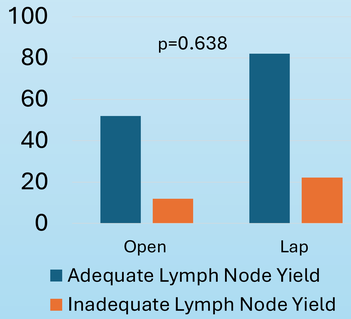
Method:

A 12-year retrospective cohort study analysis was conducted from 2012-2024 on patients with colorectal cancer across two centres within Barbados from a single consulting team in the public and private sectors. Data collected included patient demographics (gender, age), elective or emergent cases, tumour staging (TNM classification), operative time, case complexity, and lymph node yield and nodal involvement. A total of 168 patients were identified in this study.

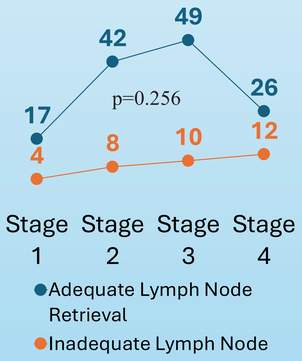
Results:

Elderly patients over the age of 60 years were noted to have slightly less nodal retrieval on average at 17.65 compared to younger patients at average 22.41. Patient population was predominantly of the black ethnic group with no significant difference.

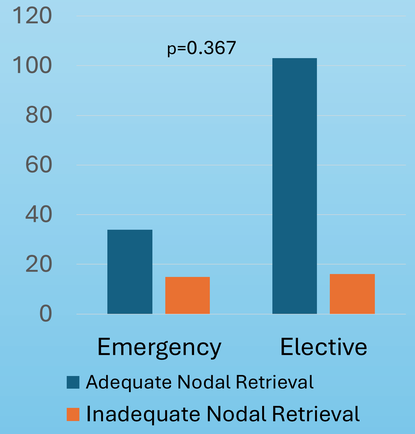
Adequacy of Nodal Yield in Open and Laparoscopic Surgeries



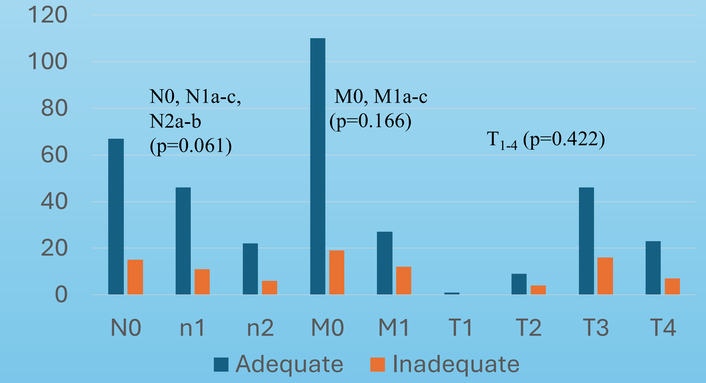
LYMPH NODE YIELD PER STAGE



Adequacy of Nodal Yield in Emergent and Elective Surgeries



Lymph Node Yield Per Pathological Stage



Conclusion(s):

Overall, nodal adequacy was achieved in majority of cases. In this setting there were no significant associations seen with lymph node retrieval with the gender, urgency of cases, advanced cancer stages and operative times (2). Despite ages above 60 were associated with a lower lymph node yield, the average yield was still above the required 12 nodes. Of note, there were more cases seen with inadequate nodal yield in left sided complex procedures (1,2).

Majority of cases with inadequate nodal retrieval were noted to be patients with patients with stage 4 cancer at 38.71%, however there was no significant difference in nodal yield per overall stage and or pathological staging (3).

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