Introduction: The stage of a malignant tumor defines how advanced the malignant process is at the time of diagnosis. In many clinical scenarios it is an indirect measurement of the efficacy of screening interventions used for early detection. We have evaluated changes in the tumor-node-metastasis (TNM) stage of colorectal cancer across a 15-year period.

Methods: This was a retrospective study in which all patients who underwent colorectal cancer surgery at the HIMA San Pablo Medical Center in 1988–1990 (period 1) and 2002–2004 (period 2) had their pathological report examined. The TNM stage for all patients was examined by using standard criteria.

Results: A total of 285 patients were evaluated: 108 in period 1 and 177 in period 2. The number of patients >71 years of age who underwent colon surgery increased (33% vs 46%). An increase in patients with stage one colon cancer was observed in period 2 (30% vs 10%) with a corresponding decrease in stage 2 and 3 (59% vs 83%).

Conclusion: The pathologic and demographic profile of patients with colorectal cancer has changed over 15 years. Patients with colon cancer are younger and have an earlier stage of disease with a decrease in lymph node involvement. Patients with rectal cancer were older and more likely to be men. (Ethn Dis. 2008;18[Suppl 2]:S2-128–S2-131)

Key Words: Colon Cancer, Rectal Cancer, Screening, TNM Staging

INTRODUCTION

Establishing the stage of a malignant tumor can define the prognosis of individual patients and aid in the choice of appropriate therapeutic modalities. The value of any staging system is to establish a survival advantage of individual patients at the time of diagnosis by instituting appropriate therapy. In this study, we evaluated changes in the age, sex, and cancer stage patients with colorectal cancer at two different time intervals.

The staging of colorectal tumors has undergone significant changes between the two time periods we aim to study. A number of tumor-related characteristics are used to define the individual stage of malignant tumors. These include the site of the primary lesion, size, and extent of growth, histological type, and histological grade. When variables are combined, the prognostic ability is significantly enhanced.

Since the description of the first practical staging system by Dukes,1 staging systems have evolved. The availability of different staging systems to classify tumor presentation across time makes a direct comparison of a cohort of patients difficult because of differences in the definition of the variables used in each staging system.2,3 Thus proper comparison of any cohort of colorectal cancer patients across time makes it necessary to recompute the stage of tumor with a uniform system.4,12

During the last 15 years, the introduction of aggressive screening interventions—fecal occult blood testing and direct colonic visualization—have played an important role in the earlier detection of colorectal cancer. In addition, the introduction of colorectal surgery as a certified subspecialty may have changed the nature and extent of surgical specimens available for staging.6,13–15 Both of these factors may modify the presenting stage of patients with colorectal cancer.5,16 We believe that if screening has become more effective, colorectal tumors would have been down-staged after 15 years.7

In this study, we examined the stage of the malignant process in a cohort of patients who underwent colorectal surgery in the San Pablo Medical Center in 1988–1990 and 2002–2004. We evaluate differences in the tumor-node-metastasis (TNM) stage presentation of colorectal cancer, along with the age and sex of patients at the time of the surgical intervention.

MATERIALS AND METHODS

Study Population
We evaluated all patients who underwent colorectal cancer surgery during 1988–1990 (period 1) and 2002–2004 (period 2) in the San Pablo Medical Center Hospital in Bayamón, Puerto Rico. A total of 286 pathology records that met the inclusion criteria for the study were included for analysis. Patients were excluded if a surgical excision was not performed. Surgical resection was defined as a procedure in which the primary tumor and draining lymph nodes were removed and reported by the pathologist. Each worksheet was assigned a specific number for purposes of confidentiality and for internal control. The worksheet included the pathological record number in order to allow future access to the report in the future if necessary. All patients