

**2016 DOMINICAN HOSPITAL  
RECTAL CANCER STUDY  
Patterns of Care and Treatment Compared to Published Treatment  
Guidelines**

Study coordinator: Michael Alexander, MD., Jessica Johnson, CTR

Study population: Invasive rectal cancer patients diagnosed and/or treated at Dominican Hospital in 2015

Total number: 9 cases

**INTRODUCTION**

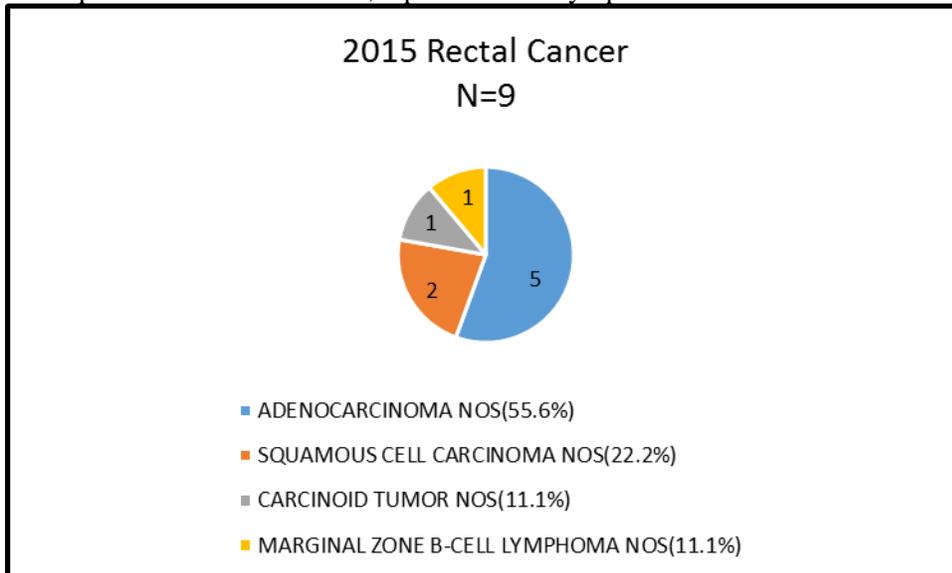
Colorectal cancer is the second leading cause of cancer death in the United States, the third most common cancer diagnosed in men and women, and accounts for 8% of all new cancer cases. An estimated 39,220 new cases of rectal cancer will be diagnosed in 2016.

There was a concern in the medical community that rectal cancer cases were not being assessed for neoadjuvant chemotherapy. Another concern was whether appropriate lymph node sampling was being performed on surgically resected rectal cancers.

In this study, we looked at rectal cancer cases diagnosed and treated at Dominican Hospital in 2015. Due to increasing recommendations by organizations such as NCCN, we decided to look at surgically resected rectal cancer to determine if the recommended number of lymph nodes were removed. We also looked at whether or not our patients in this cohort were treated with neoadjuvant and/or adjuvant chemoradiotherapy.

**HISTOLOGIC TYPES OF CANCER**

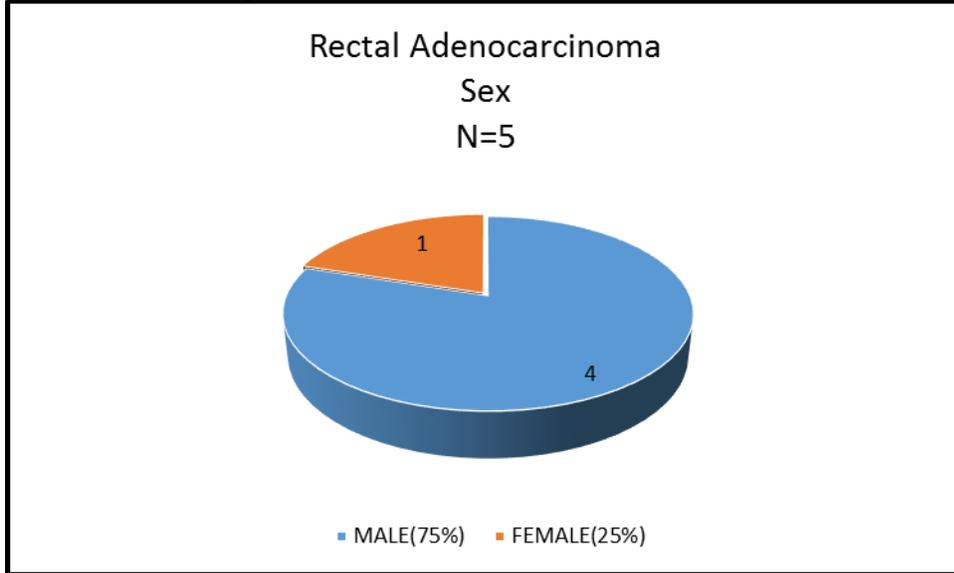
The most common type of colon malignancy diagnosed at Dominican was Adenocarcinoma. 2 patients had Squamous Cell Carcinoma, 1 patient had a lymphoma of the colon



\*For the purpose of this study, we will only consider the 5 Adenocarcinomas since the other histologies have separate guidelines.

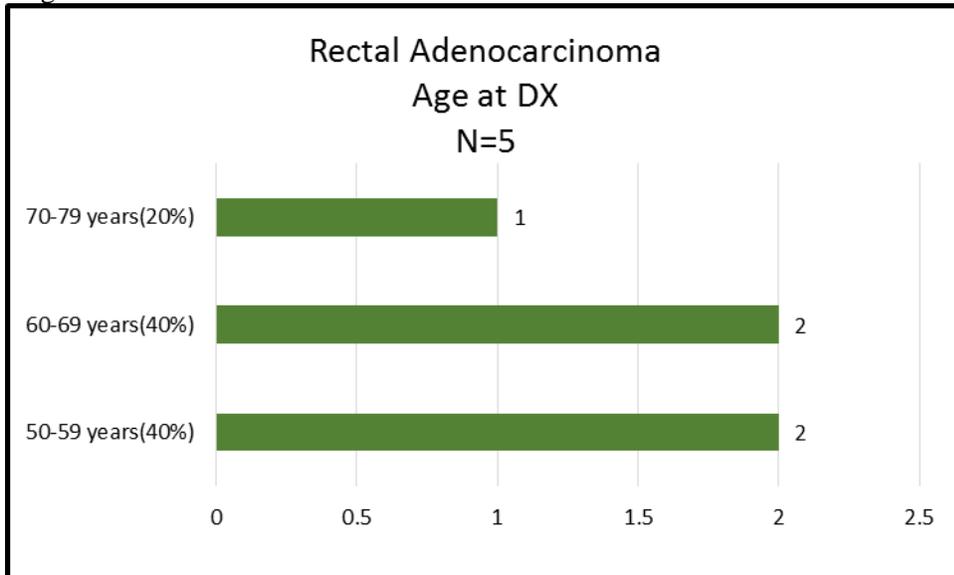
**SEX**

U.S rectal cancer incidence is 30%-40% higher in males than females. Our incidence rate is consistent with National findings.



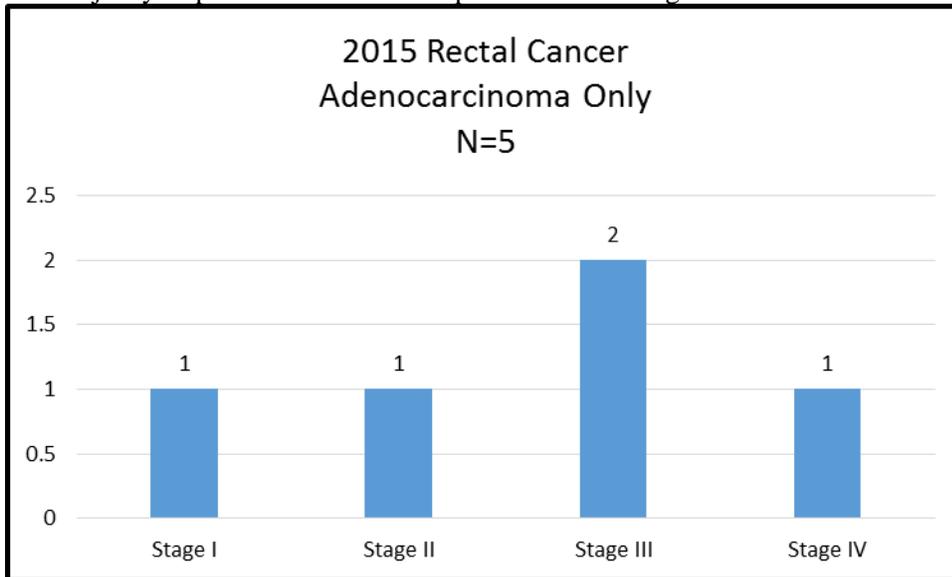
**AGE AT DIAGNOSIS**

The majority of new rectal cancer cases occur in people 50 or older. The median age at colon cancer diagnosis is 69 in men and 73 in women-consistent with national statistics.



**STAGE OF DISEASE**

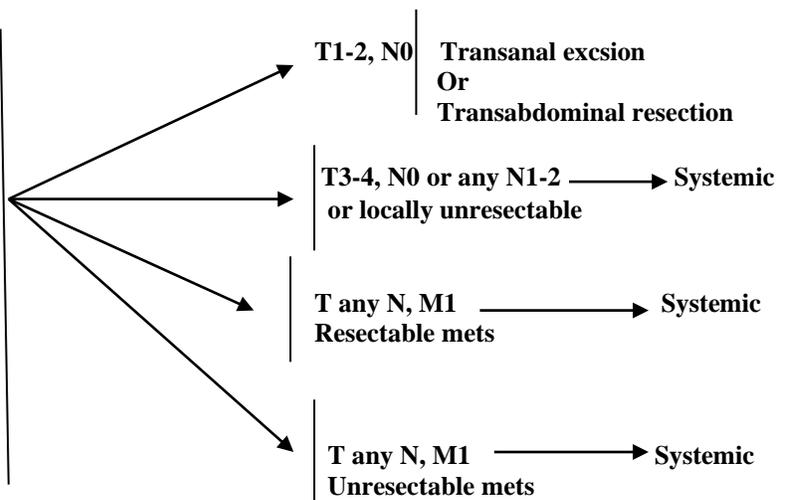
The majority of patients in this cohort presented with stage III disease.



**NCCN TREATMENT GUIDELINES FOR RECTAL CANCER:**

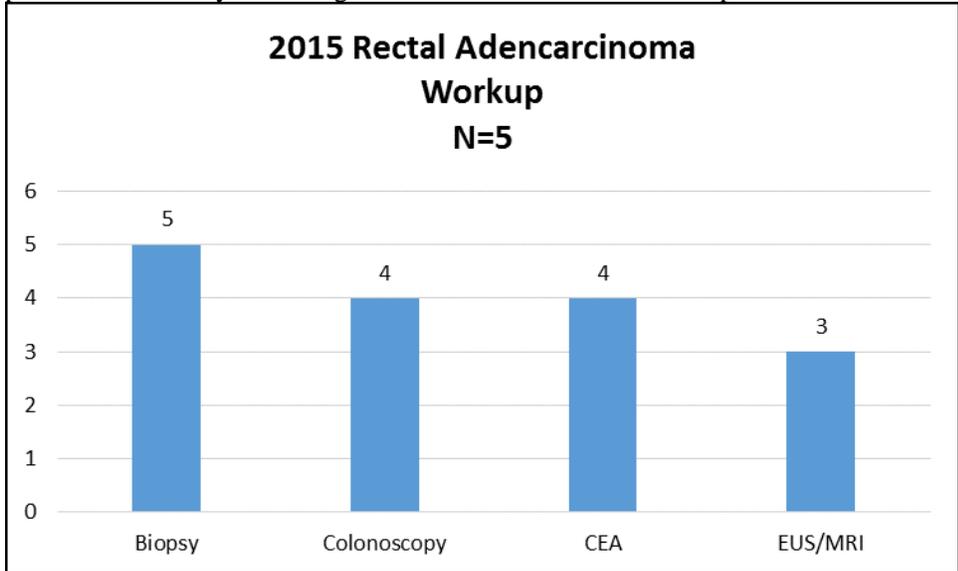
**Workup**

- Biopsy
- Colonoscopy
- CEA
- Endorectal US or Pelvic MRI



**WORKUP**

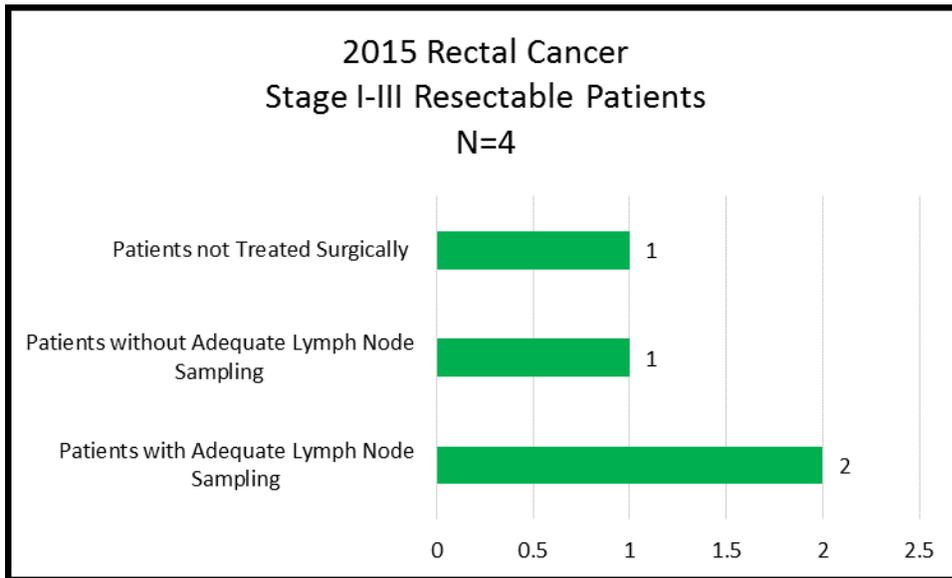
All patients were assessed for the recommended workup by NCCN treatment guidelines for rectal cancer. All patients had biopsy to confirm cancer. 4 patients had colonoscopy and CEA, as the 5<sup>th</sup> patient died shortly after diagnosis. 3 patients had EUS staging, as 1 patient died shortly after treatment and 1 patient was stage IV at diagnosis and EUS staging was not indicated. 4 patients had pre-op CEA done, the 5<sup>th</sup> patient died shortly after diagnosis and refused further workup for her disease.



**LYMPH NODES REMOVED/EXAMINED**

The International Union against Cancer, the American Joint Committee on Cancer, and a National Cancer Institute consensus panel have all recommended evaluation of at least 12 nodes to ensure adequate sampling. The College of American Pathologists has, for many years, recommended pathologic examination of at least 12 nodes in order to accurately predict node negativity. If fewer than 12 nodes are found after thorough gross examination, there are recommendations for use of additional visual enhancement techniques.

Of the 5 patients in this cohort, 4 presented with a resectable disease (stage I-III). The stage IV patient presented with unresectable metastasis and was treated with systemic treatment only. Of the 4 patients, 2 patients had >12 lymph nodes removed at surgery. 1 patient had 11 lymph nodes removed, and 1 patient did not have surgery because she expired shortly after diagnosis.



**NCCN Guidelines for Neoadjuvant Chemoradiotherapy:**

**T3, N0  
Or  
T any, N1-2  
Or  
T4 and locally unresectable**



**Chemoxrt or short course RT or multi-agent chemo**

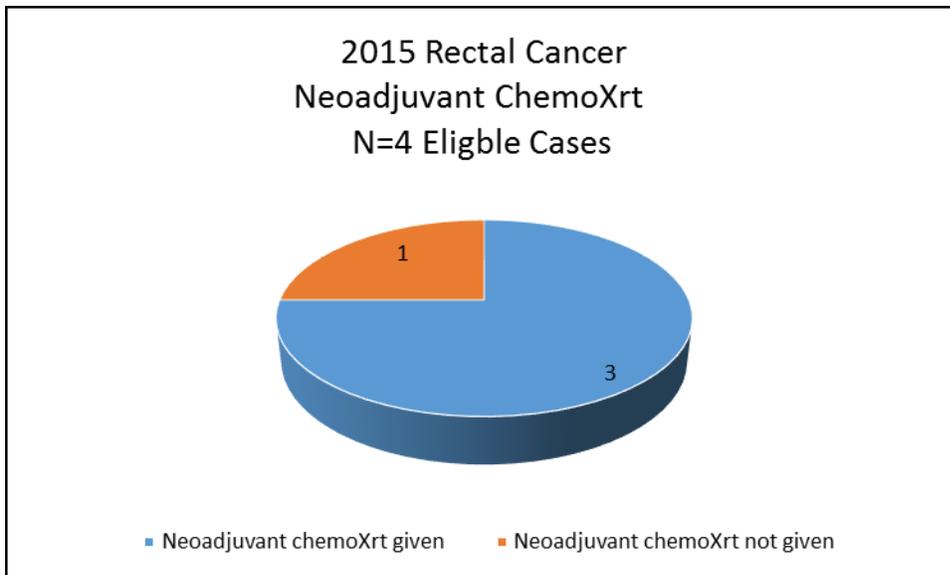


**Transabdominal resection followed by chemo  
Or  
Resection contraindicated - then systemic therapy alone**

**T any, N any, M1 (resectable mets)**

**Combination chemo followed by staged synchronous resection → consider chemoxrt  
Or  
Chemoxrt followed by staged synchronous resection followed by multi-agent chemo  
Or  
Short course of xrt followed by resection of rectal lesion followed by multi-agent chemo**

**T any, N any, M1 (unresectable mets or medically inoperable)  
Symptomatic → combination chemo or chemoxrt or diverting ostomy or stent  
Asymptomatic → combination chemo**



Of the 5 Adenocarcinoma patients, 4 presented with Stage I-III disease and were eligible to have neoadjuvant chemoradiotherapy. 3 patients did have neoadjuvant chemoradiotherapy, 1 patient died shortly after diagnosis and was not treated. The 5th patient presented with stage IV disease and was treated with systemic therapy alone.

**NCCN Guidelines for Adjuvant Treatment:**

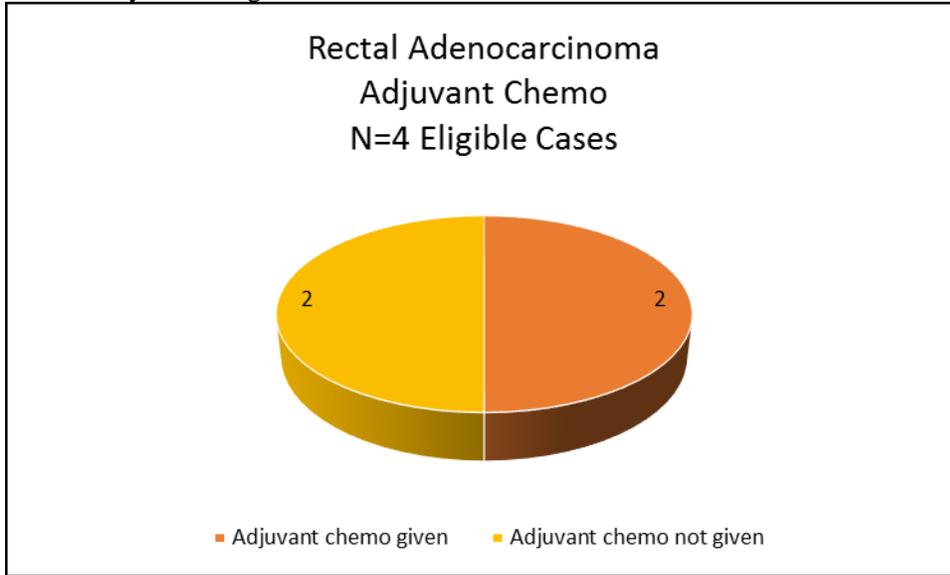
**pT1-2,N0, M0 – Observe**

**pT3-4, N0, M0**

**or - Systemic followed by Chemoxrt**

**pT1-4, N1-2**

2 patients had adjuvant chemotherapy following surgery. 1 patient refused adjuvant chemo and 1 patient died shortly after diagnosis and was not treated.



**FINDINGS:**

Of the 9 cases in this study, we focused on the 5 adenocarcinomas. The demographics of our population resemble those found in the literature.

Of these 5 cases, 3 were eligible for surgery. 2 Of those patients had the appropriate recommended number of at least 12 lymph nodes removed. 1 patient only had 11 lymph nodes removed, and 2 patients did not have any lymph nodes removed because of death shortly after an excisional biopsy and stage IV disease respectively.

Regarding diagnostic workup, all appropriate patients had CEA and colonoscopy. 3 of 3 appropriate patients had pre-operative EUS or MRI. All patients who were candidates received neoadjuvant chemoradiotherapy.

**SUMMARY:**

This study was undertaken because of a concern that inadequate numbers of lymph nodes were being removed in our rectal cancer patients and whether patients were being assessed for neoadjuvant chemo prior to surgery. Although our numbers are small, only 1 patient had less than 12 lymph nodes excised and that patient had 11, which almost meets guidelines. Some patients do not have 12 lymph nodes. It appears that all reasonable attempts were made to meet this guideline by our surgeons and pathologists. It is especially gratifying to see that all appropriate patients received neo-adjuvant chemoradiotherapy. Neoadjuvant, as opposed to adjuvant therapy, has been shown to reduce treatment related morbidity and improve chances for receiving and completing chemoradiotherapy

From the findings of this study, our surgeons, medical oncologists, radiation oncologists, and pathologists seem to be compliant with recommended treatment guidelines.

**RECOMMENDATIONS:**

Since we did not find any deficiencies, it does not appear that educational or other remedial measures are appropriate.

**FOLLOW-UP**

Because of our small numbers, it is unlikely that future evaluation of the issues raised for rectal cancer will be productive.

**REFERENCES:**

<https://www.ncbi.nlm.nih.gov/pubmed/15687365/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2684729/>

[https://www.nccn.org/professionals/physician\\_gls/pdf/rectal.pdf](https://www.nccn.org/professionals/physician_gls/pdf/rectal.pdf)