# LONG-TERM OUTCOMES OF LAPAROSCOPIC LOW ANTERIOR RECTAL RESECTION WITHOUT DIVERTING OSTOMY FOR LOW RECTAL CANCER.

**Javier Ernesto Barreras González MD PhD, Jorge Gerardo Pereira MD, Francisco Llorente Llano MD,**
**Miguel Ángel Martínez Alfonso MD PhD, Rafael Torres Peña MD PhD..**
**Department of Laparoscopic and Endoscopic Surgery, National Center for Minimally Invasive Surgery, Havana Medical University, Havana, Cuba.**

Centro Nacional de CIRUGÍA DE MÍNIMO ACCESO

## Introduction

Low anterior resection with total mesorectal excision represents the gold standard for patients with mid and low rectal cancer. Protective ileostomy or colostomy are commonly performed for low colorectal/coloanal anastomosis. There is much controversy regarding when used the diverting ostomy. The aim of this study is to analyse outcomes in our own patient population with mid and low rectal cancer, focusing on morbidity associated without diverting ostomy and long-term outcomes.

## Methods and procedures

A prospective study was on 117 patients with mid and low rectal cancer between January 2013 and August 2020 in a tertiary referral university-affiliated center specializing in laparoscopic surgery. All resections were carried out by a team of dedicated colorectal surgery and standard protocol was used for all pre-and-post-operative care. All the patients underwent total mesorectal excision with colorectal/coloanal anastomosis without diverting ostomy.

## Results:





**Table 1. Patient, tumor characteristics and surgical outcomes**

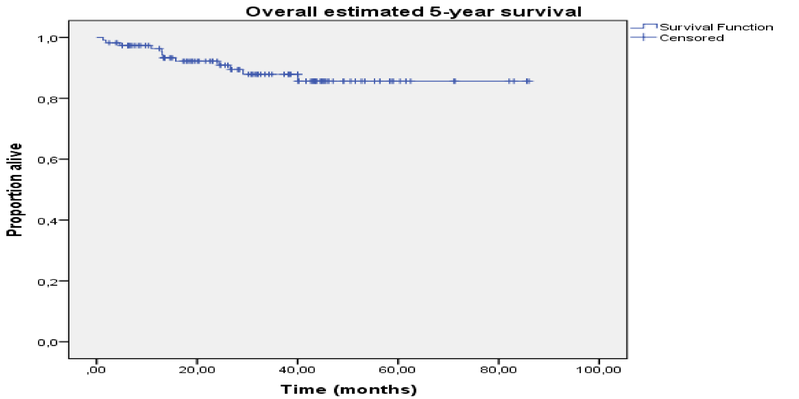
| | |
|---|---|
| Men : Women | **64:53** |
| Age (years) median (range) | 60 (23–90) |
| Tumor size (cm) median (range) | 3,6 (1-8) |
| Neoadjuvant radiochemotherapy | 102/117 (87,1%) |
| Total operative time (min) median (range) | 176 (90–360) |
| Estimated blood loss (ml) | 58 ml (10-200) |
| Conversion rate | 1 (0,9%) |
| Hospital stay (days) median (range) | 6 (3-30 days) |

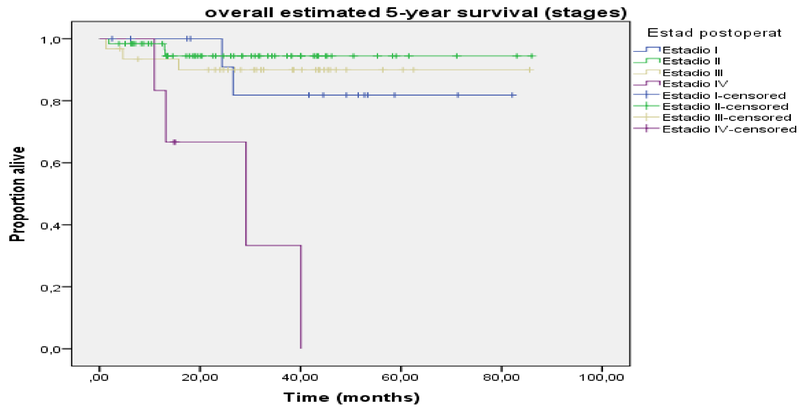
**Table 2. Stage, tumor localization and Laparoscopic procedures**

| Stage | N (%) |
|---|---|
| Stage I | 15 (12,8%) |
| Stage II | 63 (53,8%) |
| Stage III | 32 (27,4%) |
| Stage IV | 7 (6%) |
| **Tumor Localization** | **N (%)** |
| Low rectum | 87 (74,4%) |
| Mid rectum | 30 (25,6%) |
| **Laparoscopic procedures** | **N (%)** |
| Low anterior resection (LAR) with colorectal anastomosis | 55 (47%) |
| Ultra-LAR with coloanal anastomosis (TATA) | 62(53%) |

**Table 3. Morbidity, mortality and local recurrence**

| Variables | N (%) |
|---|---|
| Morbidity | 18 (15,3%) |
| Clavien Dindo Grade II | 6 (5,1%) |
| Clavien Dindo Grade IIIa | 1 (0,8%) |
| Clavien Dindo Grade IIIb | 8 (6,8%) |
| Clavien Dindo Grade V | 3 (2,6%) |
| Anastomotic leakage (5 fistulas) | 10 (8,5%) |
| **Variables** | **N (%)** |
| Mortality | 3 (2,6%) |
| Local recurrences | 9 (7,7%) |
| Overall estimated 5-year survival | 85,6% |




**Conclusion**: Laparoscopic low anterior rectal resection without diverting ostomy for mid and low rectal cancer is a feasible and safe procedure.