# WIKINGO Proyect Systematic Analysis

Tables & Figures.

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## Contents

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1	Participant characteristics	:
2	According to Local Recurrence	
3	According to Metastasis	
4	According to Exitus	
5	Incidence by outcome [95% CI]	
List	of Figures	
$\mathbf{List}$		ŗ
$\mathbf{List}$	Local Recurrence	
1	Local Recurrence	7
$\begin{array}{c} 1 \\ 2 \end{array}$	Local Recurrence	9
1 2 3	Local Recurrence	7 9 10

Table 1: Participant characteristics

Age   69.5 (10.6)   204     Sex: Men   120 (58.8%)   204     Tumor level:   204     0-6cm   77 (37.7%)     7-12cm   84 (41.2%)     13-15cm   43 (21.1%)     Tumor stage:   204     0   14 (6.86%)     I   57 (27.9%)     II   54 (26.5%)     III   79 (38.7%)     Neoadjuvant treatment   55 (27.0%)   204     Type of resection:   204     Abdominoperineal resection   43 (21.1%)     Anterior resection   138 (67.6%)     Hartmann   23 (11.3%)     Perforation   9 (4.41%)   204     Invasion circumferential margin   24 (11.8%)   204     Mesorrecto quality:   190     Satisfactory   152 (80.0%)     Partial   28 (14.7%)     No-satisfactory   10 (5.26%)     Recidive   20 (9.80%)   204     Months to recidive   23.5 [11.0;42.0]   204     Metastasis   36 (17.6%)   204     Months to Metastasis   21.0 [10.0;39.5]   204     Exitus   42 (20.6%)   204     Months to exitus   25.0 [12.0;42.2]   204				
Age       69.5 (10.6)       204         Sex: Men       120 (58.8%)       204         Tumor level:       204         0-6cm       77 (37.7%)         7-12cm       84 (41.2%)         13-15cm       43 (21.1%)         Tumor stage:       204         0       14 (6.86%)         I       57 (27.9%)         III       54 (26.5%)         III       79 (38.7%)         Neoadjuvant treatment       55 (27.0%)       204         Type of resection:       204         Abdominoperineal resection       43 (21.1%)       43 (21.1%)         Anterior resection       138 (67.6%)       43 (21.1%)         Hartmann       23 (11.3%)       204         Perforation       9 (4.41%)       204         Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)       152 (80.0%)         Partial       28 (14.7%)       204         No-satisfactory       10 (5.26%)       204         Months to recidive       23.5 [11.0;42.0]       204         Months to Metastasis       21.0 [10.0;39.5]       204         Months to				N
Sex: Men       120 (58.8%)       204         Tumor level:       204         0-6cm       77 (37.7%)         7-12cm       84 (41.2%)         13-15cm       43 (21.1%)         Tumor stage:       204         0       14 (6.86%)         I       57 (27.9%)         III       54 (26.5%)         III       79 (38.7%)         Neoadjuvant treatment       55 (27.0%)       204         Type of resection:       43 (21.1%)         Abdominoperineal resection       43 (21.1%)       204         Anterior resection       138 (67.6%)       138 (67.6%)         Hartmann       23 (11.3%)       204         Perforation       9 (4.41%)       204         Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)       190         Partial       28 (14.7%)       204         No-satisfactory       10 (5.26%)       20         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Months to Metastasis       21.0 [10.0;39.5]       204         Ex		N = 204		
Tumor level: 204  0-6cm 77 (37.7%) 7-12cm 84 (41.2%) 13-15cm 43 (21.1%)  Tumor stage: 204  0 14 (6.86%) I 57 (27.9%) III 54 (26.5%) III 79 (38.7%)  Neoadjuvant treatment 55 (27.0%) 204  Type of resection: 204  Abdominoperineal resection 43 (21.1%) Anterior resection 138 (67.6%) Hartmann 23 (11.3%)  Perforation 9 (4.41%) 204 Invasion circumferential margin 24 (11.8%) 204  Mesorrecto quality: 190  Satisfactory 152 (80.0%) Partial 28 (14.7%) No-satisfactory 10 (5.26%)  Recidive 20 (9.80%) 204  Months to recidive 23.5 [11.0;42.0] 204  Metastasis 36 (17.6%) 204  Months to Metastasis 21.0 [10.0;39.5] 204  Exitus 42 (20.6%) 204	Age		69.5 (10.6)	204
0-6cm       77 (37.7%)         7-12cm       84 (41.2%)         13-15cm       43 (21.1%)         Tumor stage:       204         0       14 (6.86%)         I       57 (27.9%)         II       54 (26.5%)         III       79 (38.7%)         Neoadjuvant treatment       55 (27.0%)       204         Type of resection:       204         Abdominoperineal resection       43 (21.1%)         Anterior resection       138 (67.6%)         Hartmann       23 (11.3%)         Perforation       9 (4.41%)       204         Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)       190         Partial       28 (14.7%)       No-satisfactory       10 (5.26%)         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	Sex: Men		120~(58.8%)	204
7-12cm	Tumor level:			204
13-15cm       43 (21.1%)         Tumor stage:       204         0       14 (6.86%)         I       57 (27.9%)         II       54 (26.5%)         III       79 (38.7%)         Neoadjuvant treatment       55 (27.0%)       204         Type of resection:       204         Abdominoperineal resection       43 (21.1%)       204         Anterior resection       138 (67.6%)       43 (21.1%)         Hartmann       23 (11.3%)       204         Perforation       9 (4.41%)       204         Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)       190         Partial       28 (14.7%)       204         No-satisfactory       10 (5.26%)       204         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	$0\text{-}6\mathrm{cm}$		77 (37.7%)	
Tumor stage: 204  0	$7\text{-}12\mathrm{cm}$		84 (41.2%)	
0       14 (6.86%)         I       57 (27.9%)         II       54 (26.5%)         III       79 (38.7%)         Neoadjuvant treatment       55 (27.0%)       204         Type of resection:       204         Abdominoperineal resection       43 (21.1%)       43 (21.1%)         Anterior resection       138 (67.6%)       43 (21.1%)         Hartmann       23 (11.3%)       204         Perforation       9 (4.41%)       204         Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)       190         Partial       28 (14.7%)       204         No-satisfactory       10 (5.26%)       204         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	$13\text{-}15\mathrm{cm}$		43 (21.1%)	
II 57 (27.9%)  III 54 (26.5%)  III 79 (38.7%)  Neoadjuvant treatment 55 (27.0%) 204  Type of resection: 204  Abdominoperineal resection 43 (21.1%)  Anterior resection 138 (67.6%)  Hartmann 23 (11.3%)  Perforation 9 (4.41%) 204  Invasion circumferential margin 24 (11.8%) 204  Mesorrecto quality: 190  Satisfactory 152 (80.0%)  Partial 28 (14.7%)  No-satisfactory 10 (5.26%)  Recidive 20 (9.80%) 204  Months to recidive 23.5 [11.0;42.0] 204  Metastasis 36 (17.6%) 204  Months to Metastasis 21.0 [10.0;39.5] 204  Exitus 42 (20.6%) 204	Tumor stage:			204
III       54 (26.5%)         III       79 (38.7%)         Neoadjuvant treatment       55 (27.0%)       204         Type of resection:       204         Abdominoperineal resection       43 (21.1%)         Anterior resection       138 (67.6%)         Hartmann       23 (11.3%)         Perforation       9 (4.41%)       204         Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)       190         Partial       28 (14.7%)       28 (14.7%)         No-satisfactory       10 (5.26%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	0		14~(6.86%)	
III       79 (38.7%)         Neoadjuvant treatment       55 (27.0%)       204         Type of resection:       204         Abdominoperineal resection       43 (21.1%)         Anterior resection       138 (67.6%)         Hartmann       23 (11.3%)         Perforation       9 (4.41%)       204         Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)       190         Partial       28 (14.7%)       204         No-satisfactory       10 (5.26%)       204         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	I		57 (27.9%)	
Neoadjuvant treatment       55 (27.0%)       204         Type of resection:       204         Abdominoperineal resection       43 (21.1%)         Anterior resection       138 (67.6%)         Hartmann       23 (11.3%)         Perforation       9 (4.41%)       204         Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)       190         Partial       28 (14.7%)       28 (14.7%)         No-satisfactory       10 (5.26%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	II		$54\ (26.5\%)$	
Type of resection:  Abdominoperineal resection Anterior resection Hartmann Perforation Perforation Mesorrecto quality: Satisfactory Partial No-satisfactory No-satisfactory Recidive Months to recidive Months to Metastasis Exitus  204  23 (21.1%) 23 (11.3%) 204  (11.8%) 204  (11.	III		79 (38.7%)	
Abdominoperineal resection Anterior resection Anterior resection Hartmann 23 (11.3%) Perforation 9 (4.41%) 204 Invasion circumferential margin Mesorrecto quality: 5atisfactory Partial No-satisfactory No-satisfactory 10 (5.26%) Recidive 20 (9.80%) 204 Months to recidive 23.5 [11.0;42.0] Months to Metastasis 36 (17.6%) 204 Months to Metastasis 21.0 [10.0;39.5] 204 Exitus  42 (20.6%) 204	Neoadjuvant treatment		55~(27.0%)	204
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Type of resection:			204
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Abdominoperineal rese	ection	43~(21.1%)	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Anterior resection		138 (67.6%)	
Invasion circumferential margin       24 (11.8%)       204         Mesorrecto quality:       190         Satisfactory       152 (80.0%)         Partial       28 (14.7%)         No-satisfactory       10 (5.26%)         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	Hartmann		23 (11.3%)	
Mesorrecto quality:       190         Satisfactory       152 (80.0%)         Partial       28 (14.7%)         No-satisfactory       10 (5.26%)         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	Perforation		9 (4.41%)	204
Satisfactory       152 (80.0%)         Partial       28 (14.7%)         No-satisfactory       10 (5.26%)         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	Invasion circumferential ma	argin	24 (11.8%)	204
Partial 28 (14.7%) No-satisfactory 10 (5.26%) Recidive 20 (9.80%) 204 Months to recidive 23.5 [11.0;42.0] 204 Metastasis 36 (17.6%) 204 Months to Metastasis 21.0 [10.0;39.5] 204 Exitus 42 (20.6%) 204	Mesorrecto quality:		, ,	190
No-satisfactory       10 (5.26%)         Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	Satisfactory		152 (80.0%)	
Recidive       20 (9.80%)       204         Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	Partial		$28 \ (14.7\%)$	
Months to recidive       23.5 [11.0;42.0]       204         Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	No-satisfactory		10~(5.26%)	
Metastasis       36 (17.6%)       204         Months to Metastasis       21.0 [10.0;39.5]       204         Exitus       42 (20.6%)       204	Recidive		20~(9.80%)	204
Months to Metastasis 21.0 [10.0;39.5] 204 Exitus 42 (20.6%) 204	Months to recidive		23.5 [11.0;42.0]	204
Exitus 42 (20.6%) 204	Metastasis		36 (17.6%)	204
· · · · · · · · · · · · · · · · · · ·	Months to Metastasis		21.0 [10.0;39.5]	204
Months to exitus 25.0 [12.0;42.2] 204	Exitus		42 (20.6%)	204
	Months to exitus		25.0 [12.0;42.2]	204

Table 2: According to Local Recurrence

			Crude		Multivaria	te	
	No event n= 184	Event $n=20$	HR	p-value	HR	p-value	N
Age (10y)	6.92 (1.02)	7.23 (1.42)	1.54 [0.94;2.52]	0.086	1.34 [0.75; 2.41]	0.327	204
Sex: Men	110 (59.8%)	10 (50.0%)	0.62 [0.26; 1.48]	0.279	0.55 [0.18; 1.64]	0.279	204
Tumor level:							204
0-6cm	69 (37.5%)	8 (40.0%)	1.48 [0.39; 5.57]	0.565	0.74 [0.09; 6.17]	0.779	
$7\text{-}12\mathrm{cm}$	75 (40.8%)	9 (45.0%)	1.50 [0.40; 5.52]	0.546	1.85 [0.41; 8.44]	0.424	
Tumor stage:							204
0	13~(7.07%)	1 (5.00%)	0.89 [0.10; 8.00]	0.920	2.35 [0.21;25.95]	0.485	
II	49~(26.6%)	5(25.0%)	1.40 [0.38;5.21]	0.617	1.16 [0.21; 6.34]	0.867	
III	69 (37.5%)	10 (50.0%)	2.01 [0.63;6.41]	0.239	1.65 [0.43; 6.25]	0.463	
Neoadjuvant treatment	$52\ (28.3\%)$	3(15.0%)	0.35 [0.10; 1.20]	0.095	0.36 [0.06; 2.03]	0.245	204
Type of resection:							204
Abdominoperineal resection	39(21.2%)	4(20.0%)	1.55 [0.49; 4.95]	0.460	2.53 [0.34;18.64]	0.362	
Hartmann	17 (9.24%)	6 (30.0%)	5.51 [1.99;15.3]	0.001	4.09 [1.03;16.32]	0.046	
Perforation	7 (3.80%)	2(10.0%)	2.71 [0.63;11.7]	0.182	2.69 [0.38;19.00]	0.322	204
Invasion circumferential margin	20 (10.9%)	4 (20.0%)	2.22 [0.74; 6.65]	0.155	1.57 [0.38; 6.60]	0.535	204
Mesorrecto quality:	` ,	,					190
Partial	24 (14.0%)	4(22.2%)	2.38[0.77;7.42]	0.134	1.62 [0.47; 5.59]	0.445	
No-satisfactory	8 (4.65%)	2 (11.1%)	7.60 [1.62;35.7]	0.010	3.04 [0.45;20.51]	0.254	

### Reference categories:

- Age, a decade
- Sex, Women
- $\bullet$  Tumor level, 13-15cm
- $\bullet~$  Tumor stage: 1
- Neoadjuvant treatment, No
- Type of resection, Anterior resection
- Perforation, No
- Invasion circumferential margin, No
- Mesorrecto Quality, Satisfactory

Figure 1: Local Recurrence

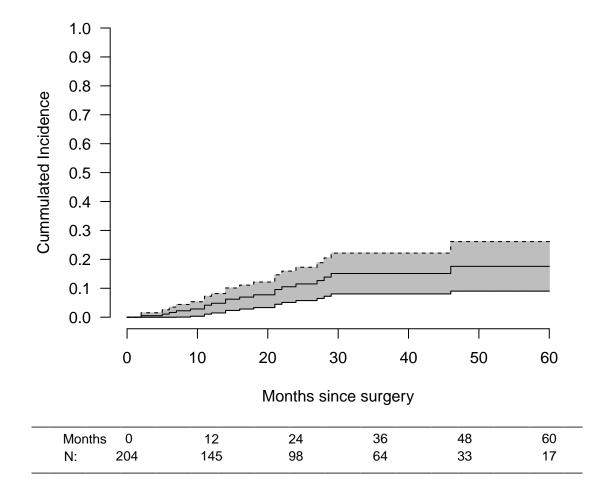


Table 3: According to Metastasis

			Crude		Multivaria	te	
	No event n= 168	Event n= 36	HR	p-value	HR	p-value	N
Age (10y)	6.97 (1.05)	6.88 (1.12)	1.05 [0.76;1.44]	0.783	1.01 [0.69; 1.48]	0.967	204
Sex: Men	98 (58.3%)	22 (61.1%)	0.98 [0.50;1.93]	0.964	1.25 [0.55; 2.87]	0.597	204
Tumor level:	,	,					204
0-6cm	60 (35.7%)	17 (47.2%)	2.42[0.81;7.20]	0.112	1.52 [0.33; 7.03]	0.591	
7-12cm	69 (41.1%)	15 (41.7%)	1.87 [0.62;5.65]	0.265	0.98 [0.29; 3.28]	0.977	
Tumor stage:							204
0	13~(7.74%)	1(2.78%)	0.86 [0.10; 7.74]	0.896	0.99 [0.11; 9.09]	0.995	
II	48 (28.6%)	6 (16.7%)	1.63 [0.46; 5.77]	0.452	0.96 [0.23; 3.97]	0.951	
III	54 (32.1%)	25~(69.4%)	5.71 [1.98;16.4]	0.001	4.21 [1.38;12.82]	0.011	
Neoadjuvant treatment	46 (27.4%)	9(25.0%)	0.64 [0.30; 1.38]	0.255	0.70 [0.26; 1.92]	0.492	204
Type of resection:							204
Abdominoperineal resection	$32\ (19.0\%)$	11 (30.6%)	2.03 [0.98; 4.19]	0.057	1.90 [0.54; 6.69]	0.318	
Hartmann	$20 \ (11.9\%)$	3~(8.33%)	1.15 [0.34; 3.88]	0.816	0.69 [0.15; 3.24]	0.64	
Perforation	7(4.17%)	2(5.56%)	1.53 [0.37;6.38]	0.560	0.57 [0.07; 4.70]	0.6	204
Invasion circumferential margin	$13 \ (7.74\%)$	11 (30.6%)	4.13 [2.03;8.42]	< 0.001	2.63 [0.93; 7.42]	0.069	204
Mesorrecto quality:							190
Partial	17 (10.8%)	11 (33.3%)	4.42 [2.11; 9.25]	< 0.001	2.46 [1.03; 5.90]	0.044	
No-satisfactory	9 (5.73%)	1 (3.03%)	1.86 [0.25;14.1]	0.548	0.54 [0.06; 4.88]	0.583	

### Reference categories:

- $\bullet\,$  Age, a decade
- $\bullet~$  Sex, Women
- $\bullet$  Tumor level, 13-15cm
- $\bullet~$  Tumor stage: 1
- Neoadjuvant treatment, No
- Type of resection, Anterior resection
- Perforation, No
- Invasion circumferential margin, No
- Mesorrecto Quality, Satisfactory

Figure 2: Metastasis

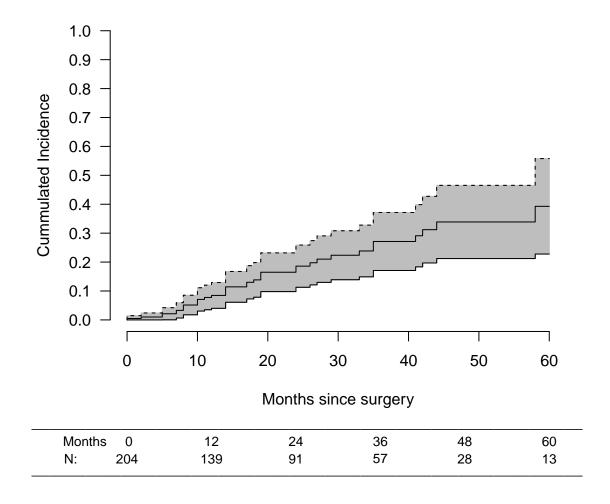


Table 4: According to Exitus

			Crude		Multivaria	ite	
	No event n= 162	Event $n=42$	HR	p-value	HR	p-value	N
Age (10y)	6.80 (1.04)	7.53 (0.98)	2.43 [1.63;3.61]	< 0.001	2.14 [1.30; 3.53]	0.003	204
Sex: Men	93 (57.4%)	27 (64.3%)	$1.10 \ [0.59; 2.07]$	0.764	1.25 [0.54; 2.92]	0.602	204
Tumor level:							204
0-6cm	55 (34.0%)	22 (52.4%)	3.89 [1.16;13.0]	0.028	2.33 [0.47;11.46]	0.299	
7-12cm	67 (41.4%)	17 (40.5%)	2.86 [0.84; 9.77]	0.093	2.73 [0.72;10.28]	0.138	
Tumor stage:							204
0	13~(8.02%)	1(2.38%)	1.18 [0.12;11.3]	0.888	3.34 [0.31;35.42]	0.317	
II	$41\ (25.3\%)$	13 (31.0%)	4.46 [1.27;15.7]	0.020	2.41 [0.57;10.22]	0.233	
III	54 (33.3%)	25~(59.5%)	6.55 [1.98;21.7]	0.002	4.01 [1.15;14.01]	0.03	
Neoadjuvant treatment	50 (30.9%)	5(11.9%)	$0.25 \ [0.10; 0.65]$	0.004	0.43 [0.13; 1.50]	0.188	204
Type of resection:							204
Abdominoperineal resection	28 (17.3%)	15 (35.7%)	3.06 [1.55;6.03]	0.001	1.13 [0.29; 4.45]	0.859	
Hartmann	15 (9.26%)	8 (19.0%)	3.50 [1.52;8.03]	0.003	0.77 [0.24; 2.47]	0.661	
Perforation	4(2.47%)	5 (11.9%)	3.20 [1.26;8.17]	0.015	4.77 [1.44;15.76]	0.01	204
Invasion circumferential margin	8 (4.94%)	16 (38.1%)	5.04 [2.70;9.42]	< 0.001	2.02 [0.86; 4.77]	0.107	204
Mesorrecto quality:	, ,	,					190
Partial	15~(9.87%)	13 (34.2%)	4.78[2.37;9.65]	< 0.001	2.83 [1.31; 6.13]	0.008	
No-satisfactory	5 (3.29%)	5 (13.2%)	12.6 [4.45;35.8]	< 0.001	3.53 [0.92;13.58]	0.067	

### Reference categories:

- Age, a decade
- Sex, Women
- $\bullet$  Tumor level, 13-15cm
- Tumor stage: 1
- Neoadjuvant treatment, No
- Type of resection, Anterior resection
- Perforation, No
- $\bullet\,$  Invasion circumferential margin, No
- Mesorrecto Quality, Satisfactory

Figure 3: Exitus

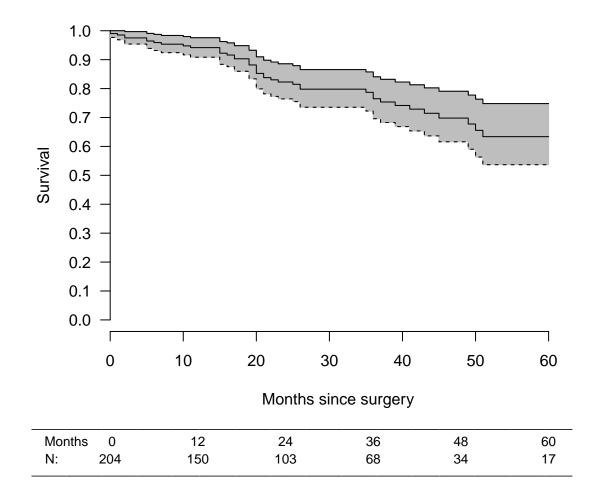


Figure 4: Local Recurrence, according to Type of Resection:



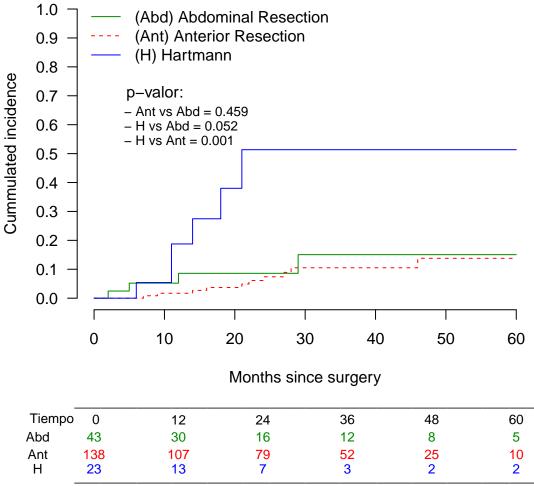


Figure 5: Metastasis, according to Type of Resection:

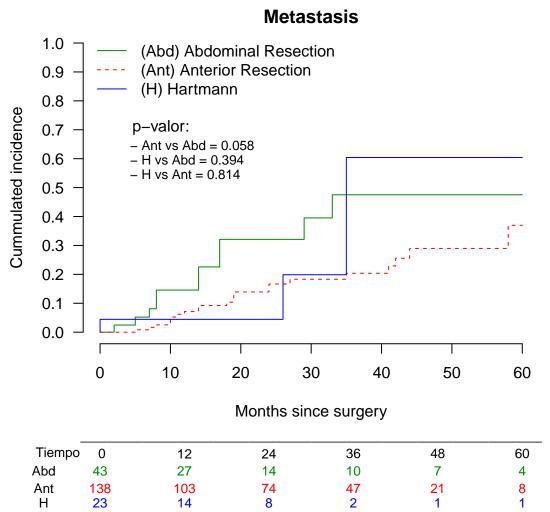


Figure 6: Survival, according to Type of Resection:

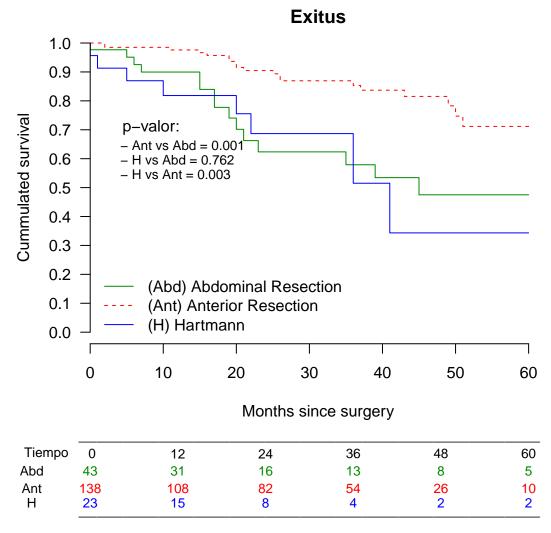


Table 5: Incidence by outcome [95% CI]

Months	Local Recurrence	Metastasis	Exitus
12	4.7 [7.84; 1.45]	8.12 [12.12; 3.93]	5.84 [9.14; 2.42]
24	10.86 [15.84; 5.59]	16.96 [22.81; 10.68]	17.73 [23.57; 11.44]
36	14.02 [19.88; 7.74]	23.75 [31.03; 15.71]	23.52 [30.41; 15.94]
48	16.12 [23; 8.63]	28.73 [37.2; 19.12]	$30.21 \ [38.39; \ 20.94]$
60	16.12 [23; 8.63]	32.48 [42.75; 20.37]	36.63 [46.32; 25.19]