



The Impact Of A Colorectal Cancer Diagnosis On Health Resource Utilization Patterns Among Patients With Hypertension Using Real-World Data

RWD190

Omolayomi Kaska¹, Sarafina Phillips¹, Adwaitha Rasanth¹, Devendra Patil¹, Sahjesh Soni¹, Murimi-Worstell IB, PhD¹
¹Massachusetts College of Pharmacy and Health Sciences (MCPHS University), Boston, MA, USA

Background and Objectives

The effect of colorectal cancer on health resource use is complex, influenced by cancer stage, patient health, healthcare system, and comorbidities. Managing comorbidities like hypertension, exacerbated by cancer-related stress, may require extra healthcare resources.

We examined hospitalization rates in colorectal cancer patients with and without hypertension to assess this impact.

Methods

Study Design and Data Source

Retrospective analysis of SEER-Medicare cohort of 2015 to 2019.

Inclusion Criteria

Patients ≥ 66 years at time of CRC diagnosis. Patients enrolled in Medicare A, B, and D, 12 months before and after CRC diagnosis.

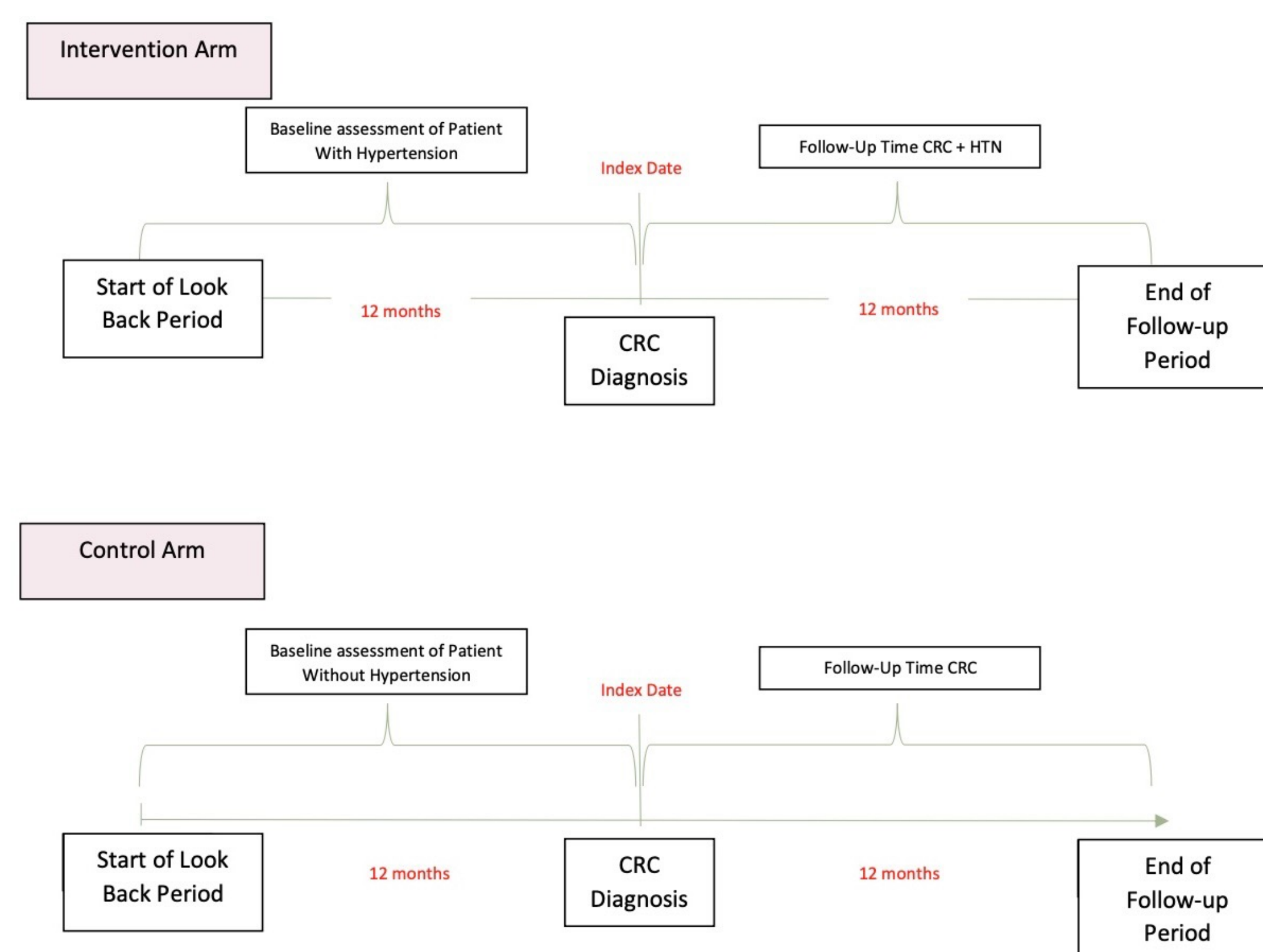
Exclusion Criteria

Patients with other cancers before CRC. Patients with unspecified health resource use.

Statistical Analysis

Confounding was handled by propensity score matching. All analyses were performed with SAS 9.4

Figure 1: Study Design Schematic



Results

Figure 2: Study Population Flow Chart

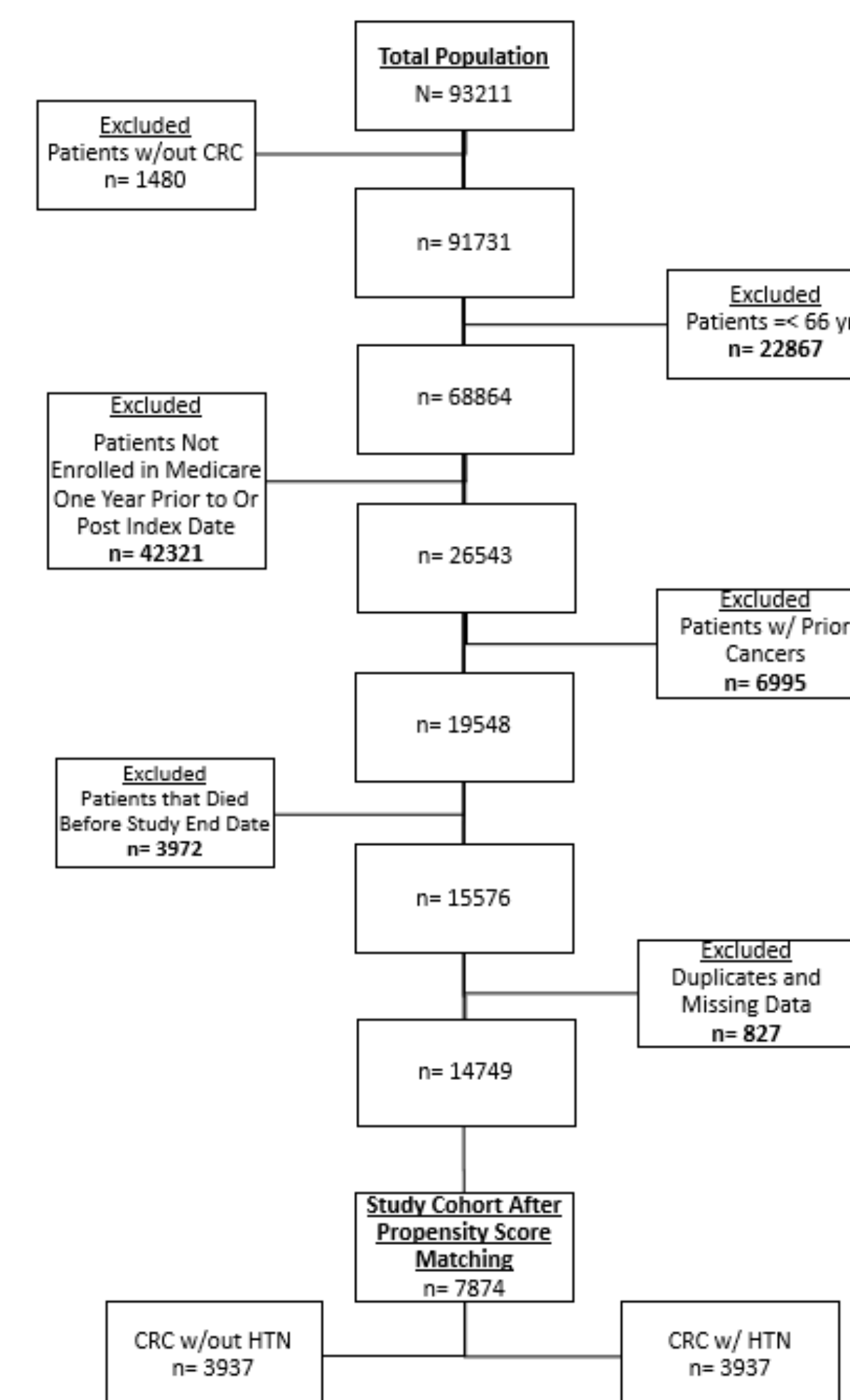


Table 1: Patient Baseline Characteristics

Patient Demographics	CRC with HTN n= 3937 (50) ^a	CRC without HTN n= 3937 (50) ^a
Age at Index Date, Mean (SD)	77.4 (7.1)	77.5 (7.2)
Race, n (%)		
• White	3310 (84.0)	3385 (86.0)
• Black	325 (8.3)	277 (7.0)
• Other	248 (6.3)	225 (5.7)
• Unknown	54 (1.4)	50 (1.3)
Sex, n (%)		
• Male	1654 (42.0)	1617 (41.0)
• Female	2283 (58.0)	2320 (59.0)
Marital Status, n (%)		
• Partnered	1387 (35.2)	1359 (34.5)
• Not-Partnered	1246 (31.6)	1245 (31.6)
• Unknown	1304 (33.2)	1333 (33.9)
Rural or Urban Indicator, n (%)		
• Counties in Metro Areas (Pop ≥ 1 million)	2301 (58.4)	2373 (60.3)
• Counties in Metro Areas (Pop $>250,000 <1$ million)	743 (18.9)	729 (18.5)
• Counties in Metro Areas (Pop $<250,000$)	338 (8.6)	320 (8.1)
• Urban Pop Adjacent to Metro Area	300 (7.6)	292 (7.4)
• Urban Pop. Not Adjacent to Metro Area	184 (4.7)	162 (4.1)
• Rural Pop.	71 (1.8)	61 (1.6)
Clinical Characteristics		
Colorectal Cancer Site, n (%)		
• Transverse Colon	2107 (53.5)	2107 (53.5)
• Descending Colon	1089 (27.7)	1089 (27.7)
• Rectosigmoid Colon	684 (17.4)	684 (17.4)
• Undefined	57 (1.4)	57 (1.4)
Colorectal Cancer Stage, n (%)		
• 1	1930 (49)	1930 (49)
• 2	675 (17.1)	675 (17.1)
• 3	935 (23.7)	935 (23.7)
• 4	249 (6.3)	249 (6.3)
• Unknown	148 (3.7)	148 (3.7)
Type 2 Diabetes Mellitus, n (%)	395 (10)	395 (10)
Stroke Events, n (%)	30 (0.8)	30 (0.8)

^aThis is a propensity score-matched cohort, hence the distribution of variables between the two groups is similar.

Table 2: Healthcare Resource Utilization Patterns

Outcome Measures	CRC Patients with HTN n= 3937 (50)	CRC Patients without HTN n= 3937 (50)	Effect Estimates (95% CI)
Proportion of Patients with ≥ 1 Hospitalizations, n (%)	3333 (84.7)	3165 (80.4)	1.04 (1.03 – 1.06) ^a
Number of Hospitalizations, Mean (SD)	1.7 (1.1)	1.5 (0.9)	1.1 (1.07 - 1.15) ^b
Average Length of Stay in Days, Mean (SD)	6.4 (5.1)	6.1 (4.9)	1.04 (1.004 to 1.084) ^c

^aOdds ratio, ^bIncidence Rate Ratio, ^cPercentage change in average length of hospital stay. CRC: Colorectal cancer; HTN: Hypertension; 95%CI: 95% Confidence Interval.

Conclusion

- Preliminary results indicate that a CRC diagnosis appears to have a higher impact on patients with hypertension compared to those without hypertension, with regards to hospitalization patterns.
- Quantifying the increased healthcare needs can improve planning and inform further studies on resource utilization.

References

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For Further Information Contact:

Omolayomi Kaska: okask1@stu.mcphs.edu
Sarafina Phillips: sphil2@stu.mcphs.edu
Sahjesh Soni: ssoni1@stu.mcphs.edu
Devendra Patil: dpatil1@stu.mcphs.edu
Adwaitha Rasanth: arasa1@stu.mcphs.edu
Irene Murimi-Worsetell: irene.murimi-worstell@mcphs.edu