

Treatment and Characteristics of Stage II Colon Cancer Patients Residing in CDC Specialized Registry Areas

Mary Elizabeth O'Neil, MPH¹; Christie Ehemann, MS, PhD¹; Frances Babcock, CTR¹; Cyllene Morris, DVM, PhD²; Vivien W. Chen, MPH, PhD³; and Timothy S. Styles, MD, MPH¹

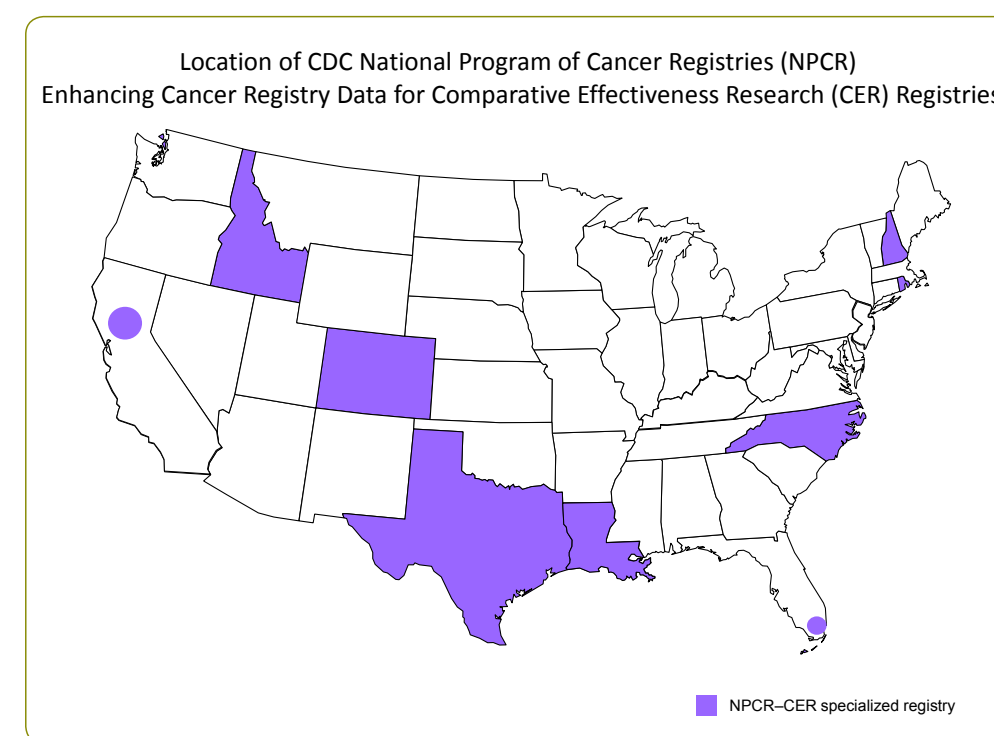
¹Division of Cancer Prevention and Control, Centers for Disease Control and Prevention, Atlanta GA, USA; ²California Cancer Reporting and Epidemiologic Surveillance (CalCARES) Program, IPHI, UC Davis Health System, Sacramento CA, USA; and ³Louisiana Tumor Registry/Epidemiology Program, School of Public Health, Louisiana State University-Health, New Orleans LA, USA

Background

- The standard of care for stage III colon cancer patients is curative resection and adjuvant chemotherapy.
- Pooled clinical trial data have shown improved outcomes among stage II colon cancer patients receiving adjuvant chemotherapy, but the results were not statistically significant.
- Some guidelines, including the American Society of Clinical Oncology's, recommend adjuvant chemotherapy be considered after surgical resection for high-risk stage II colon cancer patients; however, high-risk criteria are ill-defined and the long term benefits debated.
- This study documents patterns of care by selected patient and tumor characteristics using a population-based cohort of stage II colon cancer patients diagnosed in 2011.

Methods

- Data source:
 - CDC's National Program of Cancer Registries (NPCR) Enhancing Cancer Registry Data for Comparative Effectiveness Research (CER) project
- Inclusion criteria:
 - Patients diagnosed with stage II colon cancer (using AJCC 7th Ed. criteria) in 2011
- Exclusion criteria:
 - Patients who died ≤30 days post resection
 - Patients who initiated adjuvant chemotherapy ≥365 days post resection
 - Patients identified by a registry only via a death certificate or autopsy report
 - Patients missing race or sex data
- Approach:
 - Describe demographic and clinical characteristics of stage II colon cancer patients treated by surgery and adjuvant chemotherapy
 - Evaluate factors associated with djuvant chemotherapy by logistic regression



Results

Figure. Selected Demographics by Treatment Type, National Program of Cancer Registries (NPCR) Enhancing Cancer Registry Data for Comparative Effectiveness Research (CER).

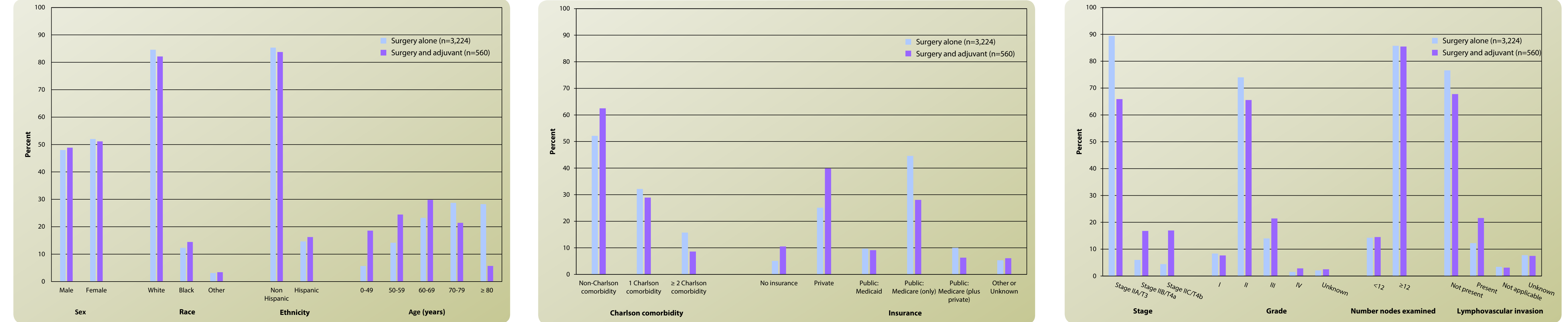


Table. Characteristics Associated with Adjuvant Chemotherapy*

	Adjusted Odds Ratio Estimates	
	Point estimate	95% Confidence interval
Age, years (continuous)	0.94	0.93, 0.95
Stage (IIB/IIC versus IIA)	4.50	3.51, 5.77
Grade (High III/IV versus Low I/II)	1.82	1.40, 2.35
Lymphovascular invasion (invasion versus no invasion)	1.79	1.37, 2.34

*Backwards stepwise regression was used to develop the most parsimonious model. Sex and race were controlled for in the logistic regression model.

Strengths and Limitations

- The NPCR-CER dataset provides population-based data for comparative effectiveness research.
 - It leverages existing registry infrastructure and authorizing laws and regulations, expediting data collection.
 - The project utilizes well-established standard definitions and codes for cancer reporting, tumor staging and treatment/drugs and experienced registry staff familiar with cancer standard rules and codes.
- Cancer surveillance data is subject to reporting delay, which may result in the under-estimates of some cancers; however, cases diagnosed in the hospital setting are often reported more quickly than cases diagnosed in nonhospital settings (such as physicians' offices).

Conclusions

- In this population-based cohort, younger stage II colon cancer patients with stage IIb/IIc (T4 lesions), lymphovascular invasion and a poorly differentiated tumor were more likely to receive adjuvant chemotherapy in addition to surgery.
- Ongoing NPCR-CER data collection on outcomes, including both recurrence and survival, will help clarify the benefits and risks of adjuvant treatments in stage II colon patients.
- Better tools for risk stratification and predicting treatment benefits are still needed.

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Contact

Tim Styles, MD, MPH, CDR, U.S. Public Health Service, TStyles@cdc.gov, <http://www.cdc.gov/cancer/npcr>

Abstract number: 6554

Acknowledgment

This research was supported with funding through CDC and ARRA funds.

National Center for Chronic Disease Prevention and Health Promotion
Division of Cancer Prevention and Control

