UCI Clinical Pharmacy Practice

Research Interest Among Cancer Patients With Or Without Cognitive Impairment

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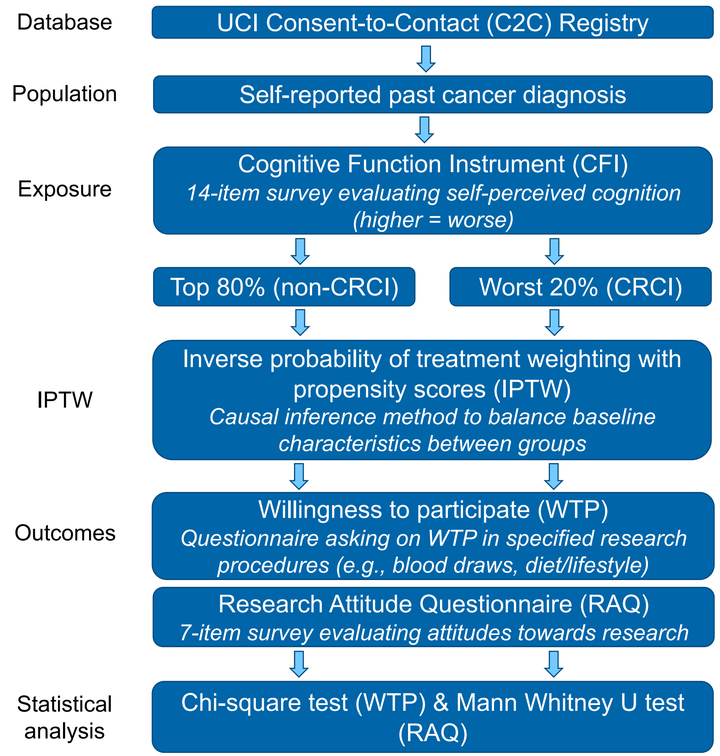
Introduction

Cancer-related cognitive impairment (CRCI) remains a significant unmet need. Continued participation from cancer patients with CRCI is necessary in generating quality data from observational and interventional studies. Understanding their research interest will help with designing feasible studies with good participation rates. *Thus, we evaluated research attitudes and willingness to participate in research among cancer patients with varying degree of cognitive function*.

Methods



Results

(1) CFI Scores & Sociodemographic Characteristics

Table 1: Baseline characteristics pre-IPTW

Variables	Non-CRCI (n = 909)	CRCI (n = 256)	*P*
CFI, mean (min, max)	1.61 (0.00, 4.00)	7.14 (4.08, 14.00)	–
Age, mean (SD)	66.6 (11.4)	65.0 (13.4)	0.144
Female, n (%)	545 (60.0)	163 (63.7)	0.310
Non-Hispanic White, n (%)	758 (83.4)	191 (74.6)	***0.001***
Education Years, mean (SD)	16.7 (2.5)	16.0 (3.0)	***<0.001***

(2) Clinical Characteristics

More CRCI registrants self-reported past diagnoses of Alzheimer's disease, mild cognitive impairment, stroke, depression, post-traumatic stress disorder, alcohol abuse than non-CRCI (all P<0.05). There were less skin cancer cases in CRCI. We observed no difference in cancer treatment received (radiation, chemotherapy, surgery) and years since last treatment.

(3) IPTW and outcomes

All propensity score-adjusted covariates achieved standardized mean differences of <0.1 after IPTW, indicating good covariate balance.

Table 2: Outcomes post-IPTW

Outcomes	Non-CRCI (n = 254.4)	CRCI (n = 896.5)	*P*
RAQ, mean (SD)	29.0 (4.3)	28.7 (4.1)	0.460
WTP, n (%)			
Approved meds	221.9 (87.2)	827.3 (92.3)	***0.030***
Lumbar puncture	95.4 (37.5)	417.4 (46.6)	***0.027***
Autopsy	175.2 (68.9)	698.7 (77.9)	***0.022***

There was no difference in attitudes towards research between CRCI and non-CRCI registrants.

Yet, more CRCI registrants were interested in research studies investigating approved medications (92% vs 87%, P=0.030), involving lumbar puncture (47% vs 38%, P=0.027), and autopsy (78% vs 69%, P=0.022).

Discussion

- The resulting higher proportions of CRCI respondents willing to participate in certain clinical research procedures reflects existing literature.
- Cancer patients with cognitive problems may be more interested in studies involving approved medications, suggesting the involvement of repurposing drugs to facilitate and advance drug development for managing CRCI.
- Lumbar puncture, with the purpose of obtaining cerebrospinal fluid (CSF) samples, can serve as a method to validate the accuracy of non-CSF biomarkers (e.g. plasma and serum) for monitoring CRCI.
- Similarly, brain donation can offer potential in determining the accuracy of candidate CRCI biomarkers, as well as facilitate CRCI biomarker discovery for future research studies.

Conclusion

We promisingly found that cancer survivors with CRCI are open to research procedures and treatments typically less utilized. Such methods may facilitate the understanding of the pathogenesis and development of interventions for CRCI.

Acknowledgements

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References

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2. UC Irvine Consent-to-Contact (C2C). https://c2c.uci.edu/