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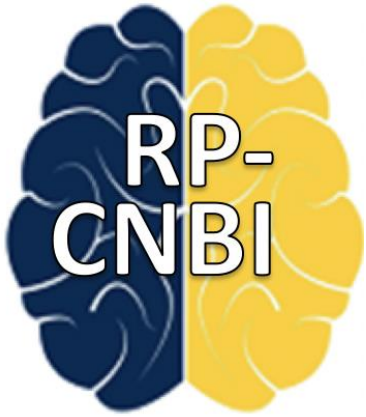
Alzheimer's Disease Research Center

RP-CNBI
Research Program on Cognition and Neuromodulation Based Interventions



What Do We Know So Far?
Current Disclosure Best Practices & Outcomes

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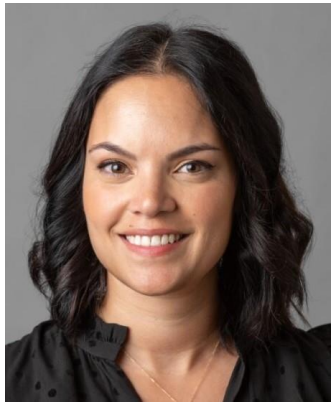
CLARiTI Disclosure Core



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ADRC Network Return of Research Results

	Type of participant			
	Dementia or MCI		Normal Cognition or SMC	
Type of information	**Roberts Survey 2019**	**CLARiTI Survey 2024**	**Roberts Survey 2019**	**CLARiTI Survey 2024**
Consensus research diagnosis	25 (83%)	**27 (75%)**	23 (77%)	25 (69%)
Neuropsychological test results	22 (73%)	27 (75%)	21 (70%)	25 (69%)
Amyloid PET results	13 (43%)	17 (47%)	8 (27%)	**16 (44%)**
MRI results	12 (40%)	**21 (58%)**	10 (33%)	**22 (61%)**
FDG PET results	8 (27%)	**6 (17%)**	6 (20%)	**4 (11%)**
Genetic test results, not APOE*	4 (13%)	**2 (6%)**	3 (10%)	2 (6%)
Tau imaging results	3 (10%)	**6 (17%)**	2 (7%)	**4 (11%)**
CSF biomarker results	3 (10%)	**8 (22%)**	1 (3%)	**5 (14%)**
APOE genetic test results	2 (7%)	**5 (14%)**	2 (7%)	**5 (14%)**

* Indicated in present survey as "Other"

Roberts et al., 2021 N = 30

Present survey N = 36

≥ 5% increase | Consistent with 2021 | **≥ 5% decrease**

Roberts et al. (2021) *Alz Dem: TRCI*

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Section 1: Considerations for Disclosure

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Legal & Social Considerations for Returning Results

J Law Med Ethics. 2018 Jun;46(2):485-498. doi: 10.1177/1073110518782955.

The Proactive Patient: Long-Term Care Insurance Discrimination Risks of Alzheimer's Disease Biomarkers

Jalayne J Arias [1], Ana M Tyler [1], Benjamin J Oster [1], Jason Karlawish [1]

Affiliations + expand

PMID: 30147000 DOI: 10.1177/1073110518782955

J Law Biosci. 2021 Jan-Jun; 8(1): lsab004. PMCID: PMC8132957
Published online 2021 May 19. doi: 10.1093/jlb/lsab004 PMID: 34040780

'That would be dreadful': The ethical, legal, and social challenges of sharing your Alzheimer's disease biomarker and genetic testing results with others

Emily A Largent, Shana D Stites, Kristin Harkins, and Jason Karlawish

Alzheimers Dement (Amst). 2022; 14(1): e12339. PMCID: PMC9405485
Published online 2022 Aug 25. doi: 10.1002/dad2.12339 PMID: 36035626

Implications of preclinical Alzheimer's disease biomarker disclosure for US policy and society

Claire M. Erickson, [1,2] Lindsay R. Clark, [2,3] Fred B. Ketchum, [4] Nathaniel A. Chin, [2] Carey E. Gleason, [2,3] and Emily A. Largent [5]

- **Supporting informed decision-making about testing/disclosure for participants with cognitive impairment**
- **Disclosure in the context of CLIA vs. non-CLIA labs**
- **Potential for medicolegal discrimination as a consequence of data sharing**

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Psychological Risks of Disclosure

August 10, 2020

Short-term Psychological Outcomes of Disclosing Amyloid Imaging Results to Research Participants Who Do Not Have Cognitive Impairment

Joshua D. Grill, PhD[1,2,3,4]; Rema Raman, PhD[5]; Karin Ernstrom, MS[5]; et al

» Author Affiliations | Article Information

JAMA Neurol. 2020;77(12):1504-1513. doi:10.1001/jamaneurol.2020.2734

- ***No increases in depression, anxiety, or suicidality after learning amyloid PET results as part of clinical trial eligibility screening***

ALZHEIMER'S ASSOCIATION | Alzheimer's & Dementia®
THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

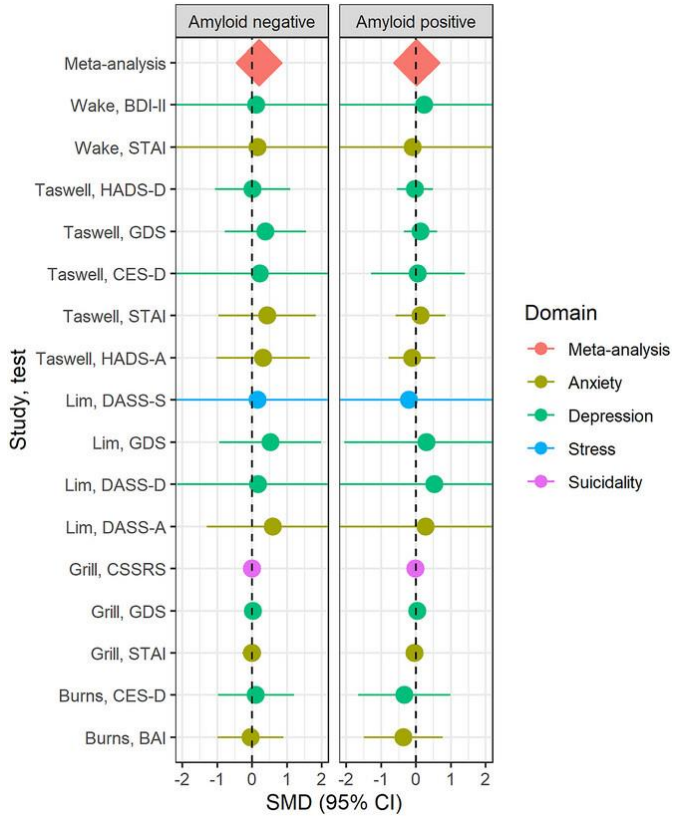
SHORT REPORT | Full Access

A randomized controlled trial of amyloid positron emission tomography results disclosure in mild cognitive impairment

Jennifer H. Lingler, Susan M. Sereika, Meryl A. Butters, Ann D. Cohen, William E. Klunk, Melissa L. Knox, Eric McDade, Neelesh K. Nadkarni, J. Scott Roberts, Lisa K. Tamres, Oscar L. Lopez

First published: 26 June 2020 | https://doi.org/10.1002/alz.12129 | Citations: 17

- ***Amyloid PET disclosure does not clearly improve the understanding or perceived efficacy to cope with a diagnosis of mild cognitive impairment***



van der Schaar J, Visser LNC, Ket JCF, et al. Impact of sharing Alzheimer's disease biomarkers with individuals without dementia: A systematic review and meta-analysis of empirical data. *Alzheimer's Dement*. 2023; 19: 5773–5794. https://doi.org/10.1002/alz.13410

- ***Meta-analysis indicates no short-term psychological impact of sharing biomarker results with adults without dementia***

Why Return Research Results?

- Participants want their results! Some see it as their right.
  (Walter et al., 2022, Participant Bill of Rights, *JAD*)

- Enhancing diagnostic confidence, personalized treatment planning, and access to clinical care and research

- Motivating lifestyle change, regardless of result
  - Health behaviors
  - Advanced planning
  - Role preparation

Rabinovici et al (2019) Association of Amyloid Positron Emission Tomography With Subsequent Change in Clinical Management Among Medicare Beneficiaries With Mild Cognitive Impairment or Dementia, *JAMA*

Why Return Research Results?

- Greater transparency and increased personal benefit may enhance diverse participation in ADRD research.
- The requirement to learn one's biomarker result does not discourage enrollment in ADRD research.
  - Participants are not concerned about study partners learning their result; in fact, they prefer it.
- Novel blood-based biomarkers may reduce time, cost, and access barriers, improving enrollment in trials, particularly for those from underserved communities.

Gabel et al. (2022) Retaining Participants in Longitudinal Studies of Alzheimer's Disease, *J Alz Disease*
Grill & Karlawish (2017) Study partners should be required in preclinical Alzheimer's disease trials*, Alz Res Ther.*
Schindler et al. (2023) Using Alzheimer's disease blood tests to accelerate clinical trial enrollment, *Alz Dement.*

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Section 2: Disclosure Practices

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Who Should Disclose?

- There is no single discipline or training background required for disclosure; in fact, an interdisciplinary team may be most effective.
  - Physicians (e.g., primary care, neurology, geriatrics)
  - Clinical psychologists, health psychologists, neuropsychologists
  - Social Workers
  - Nursing
  - Physician Associates/Assistants
  - Advanced trainees*

- Clinical license is strongly preferred




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To Whom Should We Disclose?

- **Adults Without Cognitive Impairment:**
  - Biomarker testing not indicated for clinical care (for now)
  - Research-based biomarker testing acceptable with sufficient safety monitoring

- **Adults with Cognitive Impairment (Mild Cognitive Impairment or Dementia):**
  - Biomarker testing indicated for both clinical care and research purposes.
  - Clinical stage is important in determining the relative utility, risks, and benefits of disclosure.

- **Individuals with Depression, Anxiety, or Other Psychiatric Illness**:
  - Biomarker testing/disclosure not necessarily contraindicated; however, case should be carefully evaluated to determine if and when testing should occur.

ADRC Best Practice Guidelines: Biomarker Disclosure:
https://files.alz.washington.edu/best-practices/biomarker-disclosure.pdf

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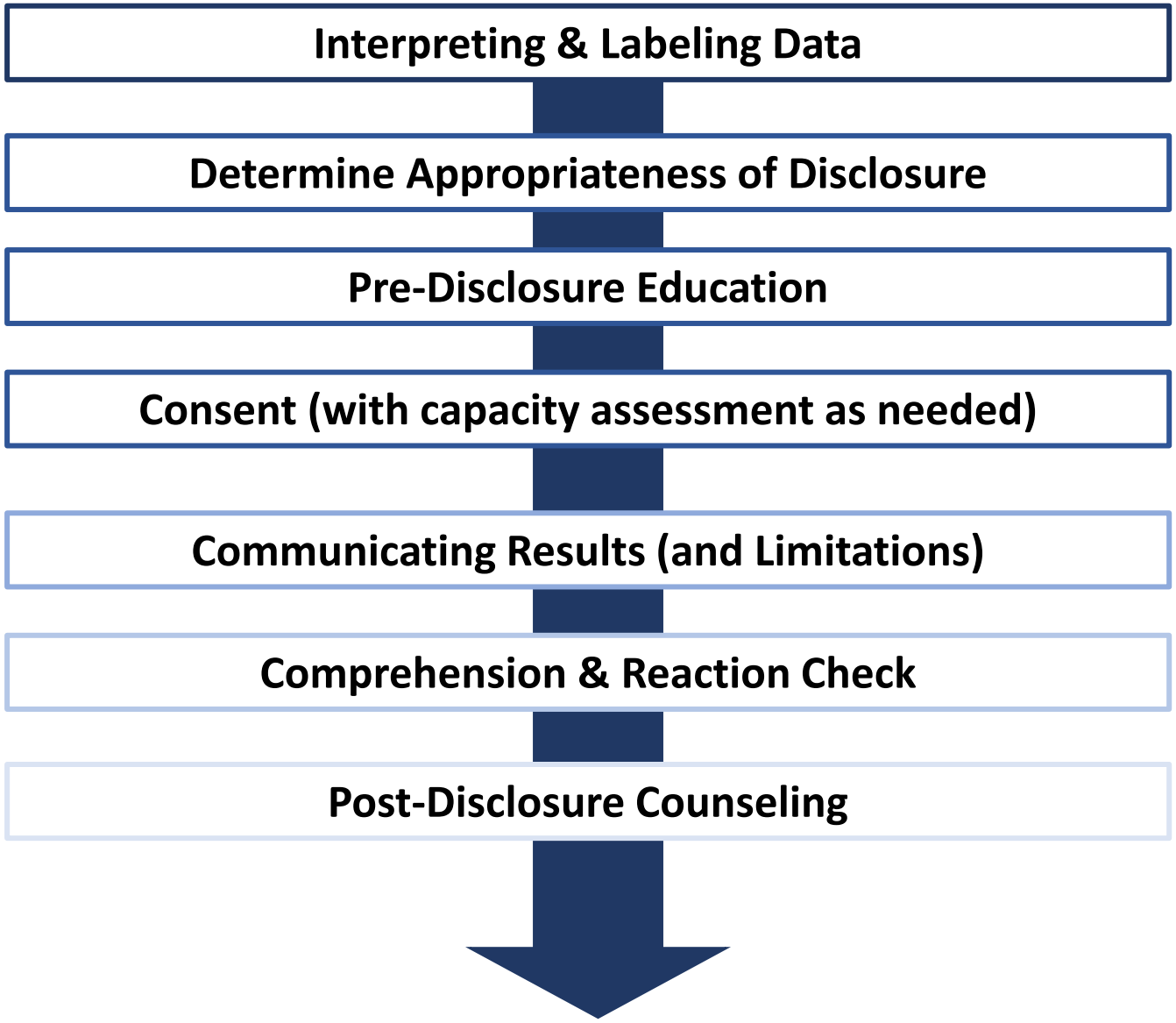
Disclosure Framework



ADRC Best Practice Guidelines: Biomarker Disclosure: https://files.alz.washington.edu/best-practices/biomarker-disclosure.pdf
Largent et al. (2023) Testing for Alzheimer Disease Biomarkers and Disclosing Results Across the Disease Continuum, *Neurology*

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Pre-Disclosure Mental Health Screening

- Participants should have **stable and positive mental health** prior to disclosure
- Select **pre-disclosure screening** based on population
  - If already highly screened into study, may use quick screens (e.g., PHQ-7, GAD-7).
  - If community population, may use more comprehensive screens (e.g., GDS-15, BAI).
  - If evidence of prior mental health conditions, complete more thorough interview (e.g., past/current mental health treatment, risk assessment, CSSRS).
- Consider **treatment, social support,** and **protective/coping resources**
- Develop **pathways** to receive these resources post-disclosure




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Pre-Disclosure Education

- Domains covered:
  - What **procedures** are involved?
  - What **alternatives** are there to this test?
  - What **will** this test tell me?
  - What **won't** this test me?
  - What are the **risks** of learning my results?
  - What are the **benefits** of learning my results?
  - **Who** else should I talk to about this decision?

- Modalities:
  - 1:1 pre-disclosure counseling sessions
  - Brochures/informational guides
  - Self-paced decision aid*

nia.nih.gov/research/alzheimers-dementia-outreach-recruitment-engagement-resources/mild-cognitive-impairment-0

Communicating Results

Interpretation Step	Sample Script
Describe the meaning of the 'headline' or label (i.e., elevated vs. not-elevated)	"An elevated amyloid result means that there is a significant amount of abnormal amyloid in your brain."
Describe what the finding means in terms of etiology/neurodegenerative disease	A+/T? or A+/T-: "This result means that Alzheimer's disease brain changes are already occurring in your brain" / A+/T+: "This result means that you have Alzheimer's disease"
Describe the relationship to cognitive problems (if present)	Cognitively Unimpaired A+: "Amyloid may build up many years before symptoms begin, but if you notice thinking changes, they are likely due in part to Alzheimer's disease." Cognitively impaired A+: "Your thinking changes are likely due in part to Alzheimer's disease."
Describe risk for future decline	A+: "It is not guaranteed that you will go on to develop dementia; however, you are at increased risk for developing dementia."

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Communicating Limitations

- We **cannot give specific numbers** or percentiles, as there is no universal biomarker, let alone threshold/cut-point for positivity.
- In the case of negative results, **we cannot guarantee that the individual will remain negative.**
- We **cannot rule in or out other neurodegenerative or medical conditions**.
- We **cannot predict if/how/when decline will occur**, regardless of results.
- We **cannot accurately combine risk factors** to predict trajectories.
- Limited research with racial-ethnic minorities (and some evidence of differential meaning of biomarkers in non-White communities) suggests that some **biomarkers should be disclosed with care in these populations**

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Assessing Comprehension of/Reaction to Results

- Consider a formal post-disclosure comprehension test to identify and clarify misunderstandings.
  - ***Coming Soon: AGREED FAQs for Disclosure Document***

- Extent of post-disclosure psychological screening should be based on the sample/participant.
  - Consider including a **test-specific distress questionnaire**, like the Impact of Neuroimaging in AD scale

- Reactions may change as participants and loved ones process results; consider a **check-in** ~1 week post-disclosure and/or a 'hotline' to discuss results.

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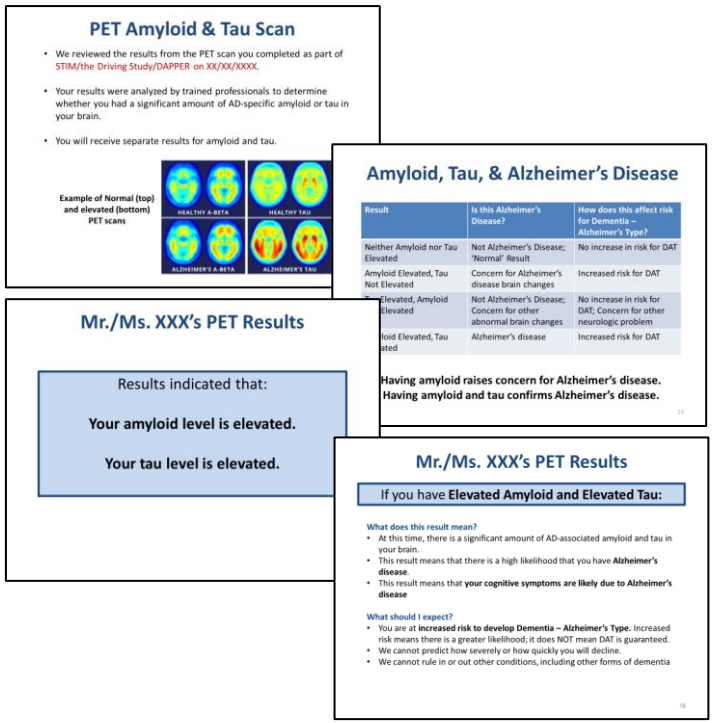
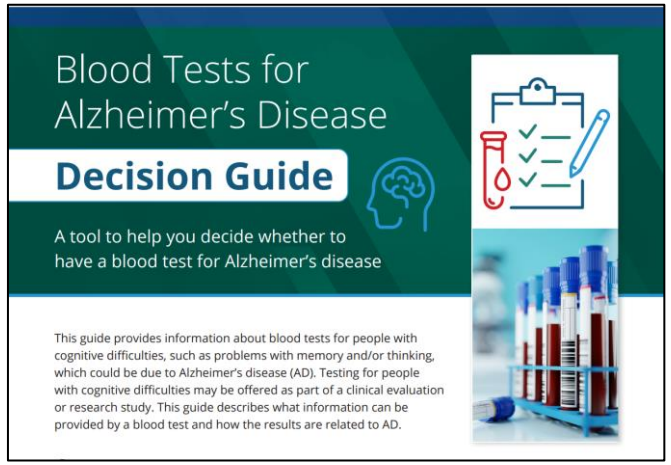
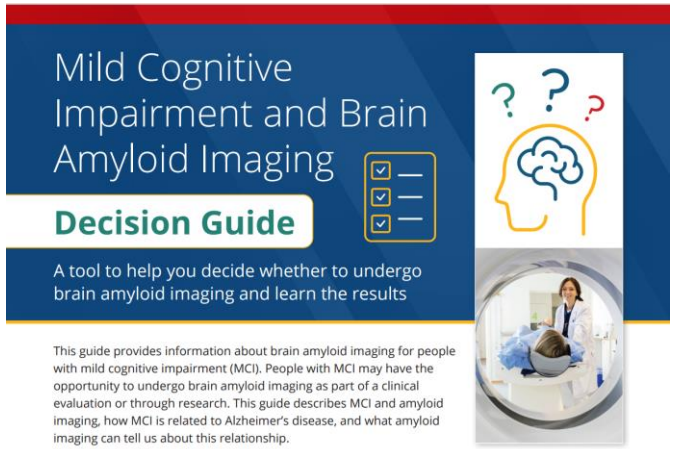
Future Directions

CLARiTI Disclosure Toolkit







- Leveraging ADRC infrastructure to develop, disseminate, and implement community informed disclosure toolkit
- Large-scale evaluation of disclosure safety and efficacy across diverse groups
- Evaluate effect of disclosure on recruitment & retention in longitudinal ADRD research

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Acknowledgements

This work was made possible through the following funding:

- SHARED I & II (NIA R03-AG063222-01; PI: Rahman)
- STIM Bioethics Supplement (NIA R01 AG058724; PI: Hampstead)
- SHARED III (NIA 1K23AG07004401-A1; PI: Rahman)
- Research Program on Cognition & Neuromodulation Based Interventions (NIH DHHS R35 AG072262-05; PI: Hampstead)
- CLARiTI (NIA U01 AG082350; PI: Johnson/Mormino)
- Michigan Institute for Clinical Health Research: Statewide Building Capacity for Research and Action Award (SBCRA; PI: Rahman)
- A Community-Academic Alliance to Identify, Educate, and Support Detroit Seniors At-Risk for Alzheimer's Disease and Related Dementias (MIDHHS; PI: Rahman)

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EASTSIDE COMMUNITY NETWORK

HEALTHIER BLACK ELDERS CENTER

CBOP

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