prediction. Validation on our proprietary cohort revealed a drop in performance with overall mixed results by AUC (POLE 0.50, MSI-H 0.69, CNV-H 0.78, and CNV-L 0.61). Overall precision 0.57, recall 0.45. Again, CNV-H with the most accurate prediction but F1 score dropped from 0.77 in the CPTAC to 0.47 on validation. POLE was the least accurate prediction subtype. DISCUSSION/SIGNIFICANCE OF IMPACT: The CNV-H subtype demonstrated robust performance, suggesting the model effectively captures the features associated with this subtype. CNV-L had moderate performance. MSI-H and POLE were notably lower. WSI-based AI models show translational potential for subtype prediction in the management of endometrial cancer but more work is necessary.

Other

29 A Pilot Study of DataDay: Daily support for people with dementia

Hafsah Umar[1], Kristen Di, Stefano[1], Djellza Dani[1], Lashvanthy Shanmugunathan[1], Arlene Astell[2], Erica Dove[2], Joseph Ferenbok[1] and Gilbert Sharpe[1]
[1]University of Toronto and [2]University of Toronto and Toronto Rehab Institute, University Health Network

OBJECTIVES/GOALS: This pilot study aims to assess the implementation of the DataDay app in memory clinics for patients with MCI or dementia, focusing on usability, user satisfaction, and impact on health outcomes. We seek to identify barriers and facilitators to implementation and evaluate its effect on reducing unnecessary hospital stays. METHODS/STUDY POPULATION: This mixed-methods study will involve 50 participants, 25 diads of patients with MCI or mild-to-moderate dementia and their caregivers from the community. Participants will use DataDay for 12 weeks, receiving reminders to log daily activities such as nutrition, mood, cognition, and physical activity. Baseline demographic data will be collected from self-reported surveys. Participants will receive training on app use, with follow-up interviews at 4, 8, and 12 weeks to gather feedback. Quantitative data analysis will include repeated measures analysis of variance to compare pre- and post-intervention outcomes, such as medication use and ER visits. Thematic analysis will be conducted on interview transcripts to understand user experiences. RESULTS/ANTICIPATED RESULTS: We anticipate the study will demonstrate the feasibility of the DataDay app for self-management in individuals with MCI or dementia. Expected outcomes include improved medication adherence, reduced emergency room visits, and increased user engagement with daily health monitoring. Qualitative feedback is expected to highlight user satisfaction with the app's reminders and ease of integration into daily routine. We also expect potential challenges to be identified such as initial learning difficulties and technology-related frustration. The data will help refine the app for better usability and inform strategies for widespread implementation in memory assessment clinics. DISCUSSION/SIGNIFICANCE OF IMPACT: The study will provide insights into the practicality of implementing DataDay in memory clinics. The results will highlight necessary adjustments and provide key factors for successful adoption in other clinics. DataDay aims to allow individuals with MCI or dementia to manage their condition at home and enhance their quality of life.

30 Extracellular vesicle metabolic protein changes during ischemic stroke†

Amanda Trout, C Prince, M Walker, L Whitnel, C O' Dell, J Frank, N Millson, M Al-Kawaz, S Pahwa, J Harp, D Dornbos III, K Pennypacker, AM Stowe and JF Fraser
University of Kentucky

OBJECTIVES/GOALS: Ischemic stroke treatments assist in restoring blood flow, but do not guarantee good outcomes. Since extracellular vesicles (EVs) able to cross the blood brain barrier, total (nonspecific) and astrocyte enriched EVs (TEVs, AEVs, respectively) from plasma may emerge as plasma biomarkers for prognostication and targeted therapeutics. METHODS/STUDY POPULATION: "Blood and Clot Thrombectomy Registry and Collaboration" (BACTRAC; NCT03153683) is a human stroke biobank at the University of Kentucky that collects samples at the time of mechanical thrombectomy during emergent large vessel occlusions (ELVO; ischemic stroke). EVs were isolated, via size exclusion chromatography, from unbanked plasma and concentrated resulting in TEVs. AEVs were immunoprecipitated with anti-EAAT1 (GLAST), an astrocyte-specific transmembrane glycoprotein. Isolated protein was sent to Olink and ran on their metabolic panel. Demographics and medical histories of the subjects were exported from REDcap and investigators were blinded during EV analysis. RESULTS/ANTICIPATED RESULTS: ELVO subjects (8 females/5 males) were an average age of 71.1 ± 11.7 years. Lower TEV enolase 2, a neuronal glycolysis enzyme, associated with increased stroke severity (NIHSS; rs = -0.7819, p = 0.0476). Higher systemically TEV quinoid dihydropteridine reductase (QDPR), essential co-factor enzyme, was associated with more severe strokes (NIHSS; rs = 0.8486, p = 0.0123) and lower cognition (MoCA; r2 = 0.7515, p = 0.0254). Interestingly, higher intracranial AEVs QDPR was associated with lower infarct volumes (rs = -0.7333, p = 0.0202), less severe strokes (NIHSS; rs = -0.6095, p = 0.0388), and better cognition (MoCA; r2 = 0.6095, p = 0.0388). Increased AEV nicotinamide adenine dinucleotide kinase another essential co-factor enzyme, intracranially also correlated to higher cognition (MoCA; rs = 0.8356, p = 0.0298). DISCUSSION/SIGNIFICANCE OF IMPACT: Plasma TEV and AEV metabolic proteins correlate with the progression of stroke outcomes and should be investigated as target therapies during MT to improve outcomes.

Precision Medicine/Health

31 Enhancing the clinical utility of whole-genome sequencing for pharmacogenomic clinical decision support

Lusi Zhang[1], Lin Boemer[1], Jeffrey R. Bishop[1] and Pawel Mroz[2]
[1]Department of Experimental and Clinical Pharmacology, University of Minnesota College of Pharmacy and [2]Department of Laboratory Medicine and Pathology, University of Minnesota Medical School

OBJECTIVES/GOALS: Pharmacogenomic (PGx) testing identifies genetic variations affecting medication response but is not yet in routine clinical whole-genome sequencing (WGS) workflows. We aimed

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