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In nursing homes, safety climate (employee attitudes and beliefs about safety) is a key contributing factor to safety and a potential leverage point for improvement. Yet relatively little is known about how contextual factors such as organizational readiness to change affect safety climate. We sampled employees from 56 Department of Veterans Affairs (VA) Community Living Centers (CLCs—nursing homes) and conducted an anonymous, cross-sectional web-based survey using the previously validated CLC Employee Survey of Attitudes about Resident Safety (CESARS) and the Organizational Readiness to Change Assessment instrument. From hierarchical mixed random effects regression models, we calculated intraclass correlation coefficients (ICC) as the proportion of CLC-level variance over the sum of CLC-level plus residual variance. Each of the CESARS' 7 safety climate domains was a dependent variable in separate models; employee- and CLC-level factors were independent variables. The survey had a 26% response rate; 1,397 respondents. Mean ORCA scores (1-5 scale, higher better) was 3.3. We began with models containing only employee-level variables. ICC values ranged from 2.34% to 9.85%, suggesting substantial variation in CESARS outcomes. As we dropped insignificant variables and added CLC-level variables to the models, the ICC decreased over 2% in six models, suggesting organizational-level variables accounted for substantial variability. The only independent variable with a significant effect in all 7 models was organizational-level: organizational readiness to change. Unlike many other organizational-level variables, organizational readiness to change is potentially amenable to low-cost interventions such as communication and teamwork interventions, providing viable opportunities to efficiently improve nursing home care.

STORIES OF TRAUMA AND RECONCILIATION OF WORLD WAR II VETERANS

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The present qualitative study examined the reconciliation of trauma experienced by 55 World War II veterans (22 aeronautical crew members, 27 non-pilot combatants, and 6 veterans with dementia) demonstrated via testimonial language within a semi-structured interview. The research team considered themes of language coherence as they relate to veteran experiences of trauma and reconciliation. Trauma literature documents the importance of personal narratives in both identifying and reconciling traumatic experiences. This study examined morals and values of participants, traumatic experiences either lived or witnessed, and reconciliation of trauma as demonstrated by the coherence of participants' linguistic and paralinguistic communication. Linguistic analysis included the use of evaluative and emotional language; linguistic devices such as crowding, topic maintenance, and humor; and lessons learned from trauma and the reconciliation process. Prosody was analyzed as a paralinguistic indicator of trauma and reconciliation using audio recordings of semi-structured interviews. The primary findings revealed that highly coherent language is present among participants with distinct content when comparing episodes from youth and reflections of experience in old age. The unique differences demonstrated overall strength of veterans' narrative identity throughout their lives. Strength of identity and coherence of language indicated adequate reconciliation of traumatic events. Reconciliation of trauma was also evident in veterans' participation in the study and generative behavior described in testimonial language.

SESSION 3540 (SYMPOSIUM)

IMMUNITY AND AGING—THE HUMAN FACE

Chair: Bérénice A. Benayoun, *University of Southern California, Leonard Davis School of Gerontology, Los Angeles, California, United States*

AGE INDUCES AN EMERGENCE FROM MELANOMA DORMANCY

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Melanoma cell dormancy is regulated by intrinsic cues that maintain a slow-cycling state in cells and by extrinsic interactions with stromal and immune components of the microenvironment. A key factor is that a significant lapse of time occurs between initial diagnosis, and metastatic recurrence of dormant cells. During this time, the organism ages and age is a poor prognostic indicator for cancer. We have found that melanoma cells form lung metastases more efficiently in aged mice and remain dormant in young mice. Analysis of the immune-microenvironment of the lung reveals that healthy young and aged mice have little difference in infiltration of immune subpopulations; however aged tumor bearing mice have significantly increased immunosuppressive MDSCs and Tregs and decreased CD4+ and CD8+ t-cells in the lung compared with young mice. Our data indicates that aging induces an immunosuppressive lung microenvironment which allows immune-evasion and an emergence from melanoma dormancy.

SEX-DIMORPHISM IN THE GENOMIC REGULATION OF AGING

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The current cohort of human supercentenarians reveals a surprising predictor for achieving such an exceptional longevity: being female. Indeed, out of 34 living supercentenarians, 33 are women. We obtained samples from 4 and 20 months old female and male mice. Our data indicates that cytokine levels are differentially regulated with age in males vs. females, with pro-inflammatory cytokines specifically upregulated in the serum of old males, but not females. Because of the central role of macrophages in inflammation and their infiltration in tissues with age, we have generated RNA-seq from purified macrophages of aging animals. Female macrophages displayed ~7-20-fold more transcriptional remodeling with aging than males. Pathways

specifically downregulated in females with aging included lysosome, inflammation and phagolysosome. Consistently, our data shows that aged female, but not male macrophages, display decreased phagocytic efficiency. Our results support the notion that there are differences in aging trajectories in female vs. male mice.

DYNAMICS OF HUMAN MUCOSAL-ASSOCIATED INVARIANT T CELL REPERTOIRES ACROSS THE HUMAN LIFE SPAN

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Mucosal-associated invariant T (MAIT) cells are innate-like lymphocytes and are important for immune responses against bacterial and viral infections. While MAIT cells are known to undergo marked numerical changes with age in humans, our understanding of how these cells alter during these different phases across the human lifespan is largely unknown. Here we investigated MAIT cells from umbilical cord, children, young-adults and elderly. Functional analyses across 18-90 y/o adults showed that their MR1-dependent polyfunctionality was robust throughout old age. Strikingly, elderly MAIT cells displayed upregulated basal inflammatory cytokines, which were reduced to the level of young-adult MAIT cells in the absence of the aged environment. T cell receptor αβ analyses of MAIT cells across the human lifespan showed narrowing with age and large clonal TCRαβ expansions in elderly. These data suggest that MAIT cells in the elderly display remarkable plasticity, highlighting MAIT cells as key players in aged immune responses.

A LONGEVITY PROMOTING FACTOR THAT SUPPRESSES IMMUNITY AND HEALTHSPAN

Arjumand Ghazi,[1] Francis Amrit,[1] Nikki Naim,[1] Ramesh Ratnappan,[1] and Julia Loose,[1] Guoqiang Wang,[2] Monica Driscoll,[2] and Judith Yanowitz[1], *1. University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, United States, 2. Rutgers University, Piscataway, New Jersey, United States*

A positive correlation exists between stress resistance and longevity, but emerging evidence suggests that lifespan and stress endurance are physiologically distinct. A major challenge in aging biology has been identifying factors that play distinct roles in these closely coupled processes because genes that promote longevity often enhance stress resistance. Here, we demonstrate that TCER-1, the Caenorhabditis elegans homolog of the human transcription elongation and splicing factor, TCERG1, has discrete and opposite effects on lifespan and stress resistance. We previously identified tcer-1 as a gene that promotes longevity in germline-less C. elegans and reproductive fitness in wild-type animals. Surprisingly, tcer-1 mutants exhibited exceptional resistance against multiple biotic and abiotic stressors, including infection by the human opportunistic pathogen Pseudomonas aeruginosa. Conversely, TCER-1 overexpression increased susceptibility to infection. TCER-1 acted cell non-autonomously to both enhance longevity and repress immunity. Interestingly, TCER-1 inhibited immunity only during the fertile stages of life and not in post-reproductive adults. Elevating its levels ameliorated the fertility loss that follows infection, suggesting that TCER-1 may repress immunity to augment fecundity. Mechanistically, TCER-1 acts through the inhibition of the conserved kinase, PMK-1, as well as through repression of PMK-1-independent, novel antibacterial factors critical for innate immunity. Overall, our data establish key roles for TCER-1 in coordinating immunity, longevity and fertility, and reveal the molecular mechanisms that distinguish length of life from functional aspects of aging.

SESSION 3545 (SYMPOSIUM)

IMPLEMENTING THE 4MS IN PRIMARY CARE: BUILDING AN AGE-FRIENDLY HEALTH SYSTEM

Chair: Ellen Flaherty, *Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire, United States*
Discussant: Terry Fulmer, *The John A. Hartford Foundation, New York, New York, United States*

The Age Friendly Health Systems initiative is a culture change movement funded by the John A. Hartford Foundation in collaboration with the Institute for Health Care Improvement. Transforming clinical training environments into integrated geriatrics and primary care systems to become Age-Friendly Health Systems must incorporate the principles of value-based care and alternative-payment models. This symposium will discuss how the implementation of the Geriatric Interprofessional Team Transformation in Primary Care (GITT-PC) model and the Reducing Avoidable Facility Transfer Model (RAFT) in primary care will improve patient outcomes focused on the 4M's of the Age Friendly Health System. The success of the GITT-PC model focuses on 4 Medicare reimbursable services including the Annual Wellness Visit, Transitional Care Management, Chronic Care Management and Advance Care Planning. The RAFT model focuses on What Matters Most to residents of long term care facilities and reduces ED visits and hospital transfers through elicitation of goals of care and 24 hour virtual support from an interprofessional geriatric team.

REDUCING AVOIDABLE FACILITY TRANSFERS: THE RAFT MODEL

Daniel Stadler[1], *1. Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire, United States*

Reducing Avoidable Facility Transfers (RAFT) is a Dartmouth-developed program that identifies and honors "what matters most" to patients residing in skilled nursing facilities in a value-based, sustainable way. RAFT aims to reduce avoidable facility transfers of older adults from long-term care and post-acute care facilities to emergency departments (ED). Key components of RAFT presently include (1) systematically eliciting goals of care for all