

(N=14,815). Descriptive statistics using weighted percentages summarized the results. Logistic regressions provided odds of insurance denial due to cancer across racial/ethnic groups: Non-Hispanic White, Black, and Other/mixed race; and Hispanic. Models adjusted for age, sex, income, and employment status. Interaction terms for age, sex, income, and employment were included in regression models to assess for effect modification. Results: Weighted chi-squares identified statistically significant differences ($p < 0.05$) between those who were denied or not denied insurance across sex, age, race/ethnicity, income, and employment. Adjusted weighted logistic regressions found significantly higher odds of insurance denial for Blacks (OR:3.01, 95%CI:1.78, 5.08), Other/mixed race (OR:2.10, 95%CI: 1.13, 3.90), and Hispanics (OR:2.16, 95%CI:1.05, 4.46) compared to Non-Hispanic Whites. Sex, income, and employment status were significant effect modifiers. Compared to White women, Black women were significantly more likely to be denied health and life insurance. Compared to Whites with incomes $> \$25K$ to $< \$50K$ and $> \$50K$ to $< \$75K$, Blacks were more likely to be denied insurance (OR:3.50, 95%CI:1.42, 8.66 and OR:7.72, 95%CI: 2.40, 24.81). Conclusions: Despite health insurance denial for pre-existing conditions being illegal under the ACA, cancer survivors report racial/ethnic disparities in health and life insurance denial due to their cancer diagnosis. This denial may be particularly harmful for people of color who are already financially vulnerable due to their cancer diagnosis and exacerbate racial/ethnic cancer disparities.

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“Should I Give it to My Kids?”: Factors that Influence HPV Vaccine Hesitancy Among African American Parents

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Purpose: The purpose of our study was to describe the influences that impact vaccine hesitancy in African American parents who have previously delayed or denied vaccinating their children against HPV. **Methods:** We conducted three focus groups, approx. 90 minutes each. Participants were recruited from various community clinics and organizations in Michigan. Using thematic analysis and the Vaccine Hesitancy Determinants framework, we described the experiences of parents who have delayed or denied vaccinating their children against HPV. **Results:** Twenty parents participated in the focus groups; the majority of the parents had Medicaid (75%), were employed full-time (55%), and had some college education but no degree (50%). Several contextual factors influenced decision-making: historical events, perceptions of both pharmaceutical and governmental figures, and perceived discrimination based on race and socioeconomic status. Whether it was the result of mistrust due to the ongoing Flint water crisis or concern over the profit-driven industry of pharmaceutical companies, these parents were deeply mistrustful of the motivations behind vaccination programs. Parental beliefs and attitudes focused on ensuring the health and safety of their children, which involved being hesitant to vaccinate. Some parents were swayed by vaccination experiences of personal

acquaintances, while others maintained their hesitancy status. Knowledge and awareness in this group were mixed regarding the HPV vaccine. Most struggled to articulate the purpose of the vaccine thoroughly and often refused to vaccinate their children. Meanwhile, only a few vaccine-specific issues were relevant in group discussions, such as vaccination schedule and provider recommendation. Some parents viewed weak recommendations as a subtle signal to not vaccinate their children, while others viewed too strong of a recommendation as a cause for concern. **Conclusion:** Findings highlight parents' willingness to stick with their strong beliefs, despite recommendations from healthcare providers and personal acquaintances. Effective communications strategies are essential for health education and establishing a trustworthy patient-provider relationship.

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Socioeconomic and Geographic Predictors of Poor Diet Quality in a Large U.S. Cohort of Adult Men and Women

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Purpose: Poor diet quality is an important determinant of obesity and chronic disease risk. A better understanding of social, economic and geographic factors associated with diet quality can inform public health and policy efforts for advancing health equity. **Methods:** This cross-sectional analysis of 155,331 adult men and women in the American Cancer Society (ACS) Cancer Prevention Study-3 examined race/ethnicity, socioeconomic (individual-level education and income), and geographic (metropolitan to rural dwelling, residence in food desert) predictors of poor diet quality, mutually adjusted using multivariable logistic regression models. A diet score reflecting concordance with the 2020 ACS dietary recommendations for cancer prevention based on intake of fruit, vegetables, whole grains, red and processed meats, sugar-sweetened beverages (SSBs) and highly processed foods was calculated from responses to a validated food frequency questionnaire, with scores ranging from 0 (worst) to 12 (best) diet quality, and scores 0-3 representing poor diet quality. **Results:** All socioeconomic and geographic characteristics assessed were statistically significant, independent predictors of poor diet quality. Compared to White participants, Black participants had a 16% higher likelihood of poor diet quality, while Hispanic/Latino and Asian/Native Hawaiian/Pacific Islander participants had 16% and 33% lower risk of poor diet quality, respectively. Higher income and education were linearly associated with better diet quality among White participants, but not among other racial/ethnic groups. Even after controlling for other characteristics, non-metropolitan residence was associated with a 61% higher risk of poor diet quality. Additionally, residence in a food desert was associated with a 17% higher risk. All diet score components contributed to disparities observed, particularly red and processed meat and SSBs. **Conclusions:** Race/ethnicity, socioeconomic and geographic factors independently predicted risk of poor diet quality among a large, diverse adult U.S. population. These findings

contribute information to more effectively target behavioral interventions, programs, and policies to improve diet quality for populations at highest risk.

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The Association Between Cancer and Alzheimer's-Type Neuropathology: A Community-Based Cohort Study

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Background: Cancer and Alzheimer's disease are common diseases in aging populations. Intriguingly, prior research has reported a lower incidence of Alzheimer's disease dementia among individuals with a history of cancer. Both are prevalent and lethal conditions. The current study was conducted to investigate the association of cancer history with neuropathological and cognitive features. **Methods:** Data were drawn from elderly, longitudinally evaluated participants in a community-based cohort study of aging and dementia who came to autopsy at the University of Kentucky Alzheimer's Disease Research Center. The data were linked to the Kentucky Cancer Registry, which is a population-based state cancer surveillance system, to obtain cancer-related data. We examined the relationship between cancer history, clinical dementia diagnoses, Mini-Mental State examination test scores, and neuropathological features using inverse probability weighting to address confounding and selection bias. **Results:** Included participants ($n = 785$) had a mean \pm SD age of death of 83.8 ± 8.6 years; 60.1% were female. Positive cancer history was determined in 190 (24.2%) participants. The prevalence of at least one APOE $\epsilon 4$ allele was lower among participants with cancer history compared to cancer-free participants (32.6% vs 42.0%, $P = 0.0063$). Participants with cancer history had lower odds of MCI/Dementia, and higher cognitive test scores (e.g., comparing MMSE scores evaluated at six and < two years prior to death, $P < 0.001$). Cancer history was also associated with reduced odds of intermediate (III/IV) or severe (V/VI) Braak Neurofibrillary tangle stages, moderate/frequent neuritic plaques, moderate/frequent diffuse plaques, and moderate/severe cerebral amyloid angiopathy (all $P < 0.05$). By contrast, TDP-43, $\sqrt{\epsilon} \pm$ -synuclein, and cerebrovascular pathologies were not associated with cancer history. **Conclusion:** In this study, we showed that cancer history was associated with a lower burden of Alzheimer's disease pathology and clinical dementia. These findings provide an additional basis of support for prior epidemiological research reporting a protective association between cancer and Alzheimer's disease-type dementia.

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Type-2 Diabetes Mellitus and Risk of Colorectal Polyps: A Colonoscopy-Based Study Using Natural Language Processing

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Purpose: Although type-2 diabetes (T2D) has been associated with colorectal cancer in previous studies, the association of T2D with colorectal polyps is unknown. **Methods:** Using pathology reports from the University of Utah (UU) Enterprise Data Warehouse (EDW), we developed a rule-based natural language processing (NLP) pipeline to extract colorectal polyp diagnoses and features (site, shape, number, size) on 15,679 patients who underwent a colonoscopy at the UU Gastroenterology clinic from 2013-2016. The NLP pipeline was validated by manual abstraction of 350 pathology reports, and demonstrated excellent performance (accuracy 91%). Patient characteristics, including age, sex, race, diabetes status, smoking, BMI, and medication use, were abstracted from the EDW. Odds ratios (OR) and 95% confidence limits (95% CI) adjusted for abstracted variables were calculated using multivariable polytomous logistic regression. **Results:** Participants were on average 56 years old, 85% White, 50% male, with a mean BMI of 29 kg/m². About 27% of the participants reported history of T2D; 71% of whom used anti-diabetes medication. Participants were classified as having adenomas (30%), serrated polyps (16%), synchronous adenomas and serrated polyps (19%) or as polyp-free controls (35%). T2D was associated with a statistically significant lower risk of colorectal polyps [0.83(0.73,0.92)]. When evaluated by polyp subtype, T2D was marginally associated with reduced adenoma risk [0.90(0.80,1.02)], and inversely associated with risk of serrated polyps [0.80(0.67,0.93)]. The associations did not vary by lesion severity within polyp subtypes. There was a statistically significant decreased risk for polyps among anti-diabetes medication users [0.84(0.69,0.99)]. **Conclusions:** Overall, T2D was associated with a statistically significant reduced risk of colorectal polyps; this reduced risk was consistent for both adenomas and serrated polyps. As T2D has previously been shown to increase colorectal cancer risk, this differential association with colorectal polyps may possibly be due to a variable effect of anti-diabetes medication use. Further studies are needed to better understand the mechanisms through which diabetes and its treatment may be differentially associated with colorectal polyps.

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Understanding Cancer Genetic Risk Assessment Intentions in a Tailored Risk Communication Intervention Randomized Controlled Trial

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Background: Pathogenic variants in cancer predisposition genes increase second, hereditary cancer risk among women with breast and/or ovarian cancer, and primary cancers in their relatives. National guidelines recommend cancer genetic risk assessment (CGRA)