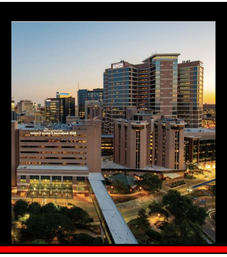

Trends and Predictors of Engagement in Preventive Health Measures in Patients with Chronic Lymphocytic Leukemia: A Prospective Analysis of Vaccinations and Cancer Screening Practices

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BACKGROUND

- Patients with CLL are at increased risk of infections and other cancers due to both disease-related and treatment-related immunosuppression.
- While vaccination, routine cancer screenings are well-established for the general population, their uptake in patients with CLL remains incompletely characterized.

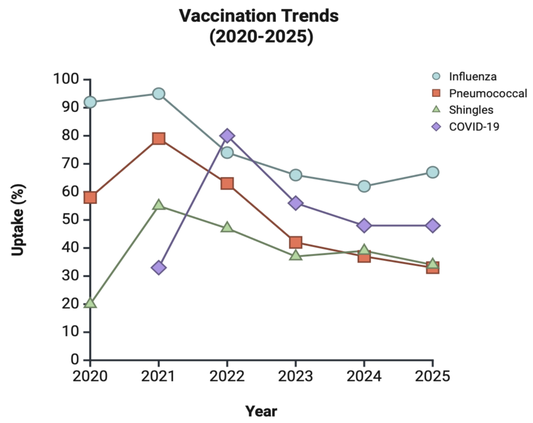
STUDY OBJECTIVE

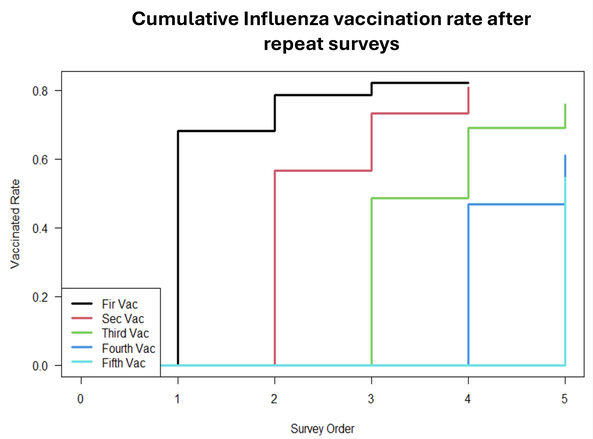
The objective of this study was to evaluate longitudinal trends and predictors of preventive health engagement in patients with CLL, with a focus on vaccination, cancer screening, and primary care utilization between 2020 and 2025.

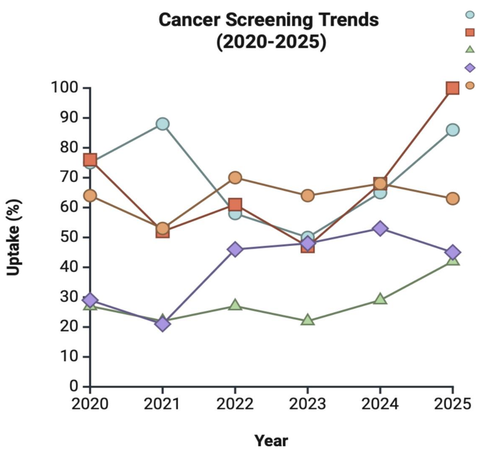
METHODS

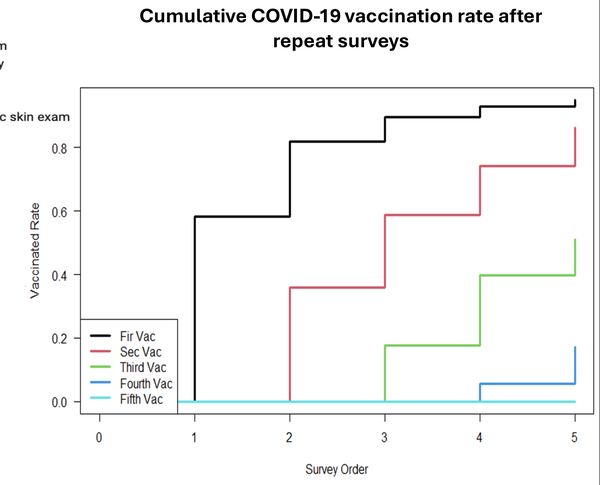
- Prospective, survey-based study conducted from 2020–2025 at UT MD Anderson Cancer Center.
- Patients with CLL completed a standardized health maintenance questionnaire during annual in-person clinic visits.
- Questionnaire captured: vaccinations (influenza, pneumococcal, shingles, COVID-19), cancer screening (mammogram, Pap smear, PSA, colonoscopy, dermatology skin exam), and primary care visits.
- Cumulative uptake of influenza and COVID-19 vaccination assessed in patients with serial surveys.
- Multivariable logistic regression used to evaluate associations with demographic variables (age, sex, race, ethnicity, survey year), reported as OR with 95% CI.

RESULTS









CONCLUSIONS

- Vaccination and cancer screening rates declined post-pandemic, but repeated yearly surveys improved adherence and facilitated recovery in mammography, colonoscopy, dermatology, and PSA screening.
- Longitudinal survey-based strategies represent a valuable quality improvement approach to enhance preventive care in patients with CLL.

KEY FINDINGS

Vaccinations: Influenza and pneumococcal vaccination rates declined post-2022 (2025 vs. 2020: OR = 0.18, p = 0.027; OR = 0.37, p = 0.037), while shingles uptake peaked in 2021 (OR = 4.89, p = 0.018) and COVID-19 vaccination peaked in 2022 before declining (2025 vs. 2022: OR = 0.23, p < 0.001). Older age predicted higher uptake; sex, race, and ethnicity were not significant.

Cumulative Uptake: Serial survey participation improved preventive care — influenza vaccination rose from 68% to 82%, and COVID-19 vaccination from 58% to 95% (second dose: 36% → 86%).

Cancer Screening: Mammography and colonoscopy recovered by 2025 (mammogram OR = 6.07, p = 0.0049; colonoscopy OR = 0.30, p = 0.01). Pap smear and PSA uptake remained low to modest; dermatology visits were stable.

Disparities: Non-Hispanic patients had higher PSA screening (OR = 1.9, p = 0.023), while Black (OR = 0.07) and Asian (OR = 0.12) patients had significantly lower uptake (p < 0.01).

Primary Care: Engagement remained high (>85%) across all years.

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