

2026 ANNUAL MEETING

Poster 61: Use of decision tree analysis to prioritize rurality for intervention among geography-based barriers to outpatient specialty palliative care referrals for patients with gynecologic cancers.

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Topic

Financial Toxicity and Disparities

Objectives

Prior research from our group identified geography-related social determinants of health (SDOH) associated with lesser likelihood of referral to outpatient specialty palliative care for eligible patients with gynecologic cancers. We assessed if there was a hierarchy as to which SDOH exerted the strongest effect as a barrier to placement of palliative care referrals.

Methods

We conducted a retrospective cohort quality improvement study evaluating placement of outpatient specialty palliative care referral among patients with gynecologic cancers evaluated between 2019 – 2022 at our institution who met American Society of Clinical Oncology (ASCO) referral criteria. SDOH measured included (1) rurality (rural versus urban residency based on Rural-Urban Continuum Codes), (2) distance from institution (≥ 50 miles versus < 50 miles), (3) area-level deprivation [Area Deprivation Index (ADI) ≥ 70 th percentile versus < 70 th percentile], and (4) having a primary care provider [(PCP), yes versus no]. Decision tree analysis was used to identify SDOH subgroups associated with referral to palliative care.

Results

191 (44%) of 432 patients with gynecologic cancers meeting ASCO criteria were referred to outpatient specialty palliative care. The final decision tree included four leaves. Rurality was the most important predictor of referral, followed by primary care access, and distance from institution. Leaf-specific referral probabilities ranged from 24% to 66%. Patients living in urban areas, without a PCP, and living in an area characterized by lower ADI had the highest referral rate (66%). The lowest referral rate (24%) was among patients living in rural areas, with a PCP, located farther away, and living in areas of higher deprivation. Model performance was adequate with specificity 0.79, sensitivity 0.50, and AUC 0.677.

Conclusions

Rurality is the primary driver among geography-related SDOH of missed outpatient specialty palliative care referrals. Further research is needed to determine what elements of rural living beyond having a PCP, distance from hospital, and ADI pose barriers to engaging with palliative care. Increasing the size of the rural palliative care workforce and telehealth use as well as strengthening internet access may help to mitigate disparities in access to care.